Clinical Lecture

ON

THE TREATMENT OF TYPHOID FEVER BY PROLONGED IMMERSION IN WATER.

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GENTLEMEN,—Some of the cases which I have to record have been very severe and complicated, and it will be, therefore, necessary to go pretty fully into details, which, however, I hope will not weary you. After recording the cases I will then deal with the agents used in the treatment, and their effects on the various organs and conditions of the body.

CASE 1. *Severe case of typhoid fever; immersed in tank for eleven days; cure.*—O. A——, aged twenty-two, Norwegian sailor, was admitted to hospital on Aug. 12th, 1889. When he left Odessa, seven weeks previously, he was quite well, but five weeks later, or two or three days before reaching Malta, he began to lose his appetite, got out of sorts, and felt sick. For eight days he has suffered from vomiting and diarrhœa, and has been confined to bed. He is a tall, lanky, spare, but muscular man, who seems to have enjoyed good health previously to the present illness. It is rather difficult to fix the exact date of the commencement of this disease, but he seems to have become sick, in his own words, in "his belly" about thirteen days ago, though he has only been confined to his bed for the last eight days. He is now suffering from well-marked typhoid fever. The rose-coloured lenticular spots are fairly numerous; there is considerable tenderness in the right iliac fossa, and the motions are liquid and of a pea-soup character; the spleen is enlarged. He is exceedingly prostrate, very apathetic, and lies on his back in a listless manner, regardless of passing events. His tongue is tremulous, fissured, and covered with a dry brown fur. Pulse quick, small, and dicrotic. His arteries are rigid and rather tortuous. He was placed on a milk diet, and ordered six grains of naphthaline every four hours. At 8 P.M. on the night of admission his temperature rose to 105°, and he then received a dose of antipyrin. The following morning, at 8 o'clock, his temperature had fallen to 101·6°, but at noon it had reached 103°. He was soon afterwards placed in a tank at a temperature of 95°, but even then his temperature continued to rise a little, and at 4 o'clock 103·6° was recorded.—Aug. 14th (sixteenth day of the disease), 8 A.M.: Temperature 97·8°; noon 101°. He was now taken out of the tank, and his temperature quickly ran up to 103°. He was out of the water about an hour, but at 4 P.M. the temperature was 103·4°; at 8 P.M. 103°. From this date the temperature kept steadily falling, each morning and evening records being lower than those of the preceding day. At no time after the twentieth day of the disease did the evening temperature exceed 101°, while on the twenty-first and succeeding days the morning records were normal or subnormal. The progress of the case was very satisfactory throughout. Within twenty-four hours of his being placed in the tank, his dry, brown, cracked tongue had become moist; he was much livelier, and there was no appearance of any delirium. He expressed himself as feeling quite comfortable. His pulse had become slower and less dicrotic, and after the first day in the tank did not exceed 84. He was taken out of the tank on Aug. 24th (twenty-sixth day of disease), when the temperature had been about normal for twenty-four hours. After this there was an average rise of from 1° to 1½°, and the evening temperature did not sink below 100° till the thirty-second day of the disease. The temperature of the tank was throughout between 90° and 95°. For four or five days before he was taken out of the tank there was a great craving for food, but he was kept on milk till the twenty-fifth day, when he was allowed bread-and-butter.—Sept. 5th: He is progressing very satisfactorily and gaining flesh. Superficial arteries very rigid and tortuous; pulse feeble; heart-sounds dull. The patellar reflexes are present, but not exaggerated. He was placed on ordinary diet and given a caffeine mixture.—13th: Weighed to-day for the first time, 123lb.; 20th, 124lb.; 27th, 129lb.; Oct. 4th, 131lb. On the latter date he was discharged quite well and fit for work. The macerating effect of the water on the hands and feet of this "horny-handed son of toil" was very marked, and it was a long time after he left the tank before they had assumed their natural appearance, and during the process of exfoliation the keratin smell was rather offensive. I have never previously met with such atheromatous arteries at such an early age.

CASE 2. *Typhoid fever; immersed in water for six days; cure*—O. O'N——, aged fourteen, was admitted to hospital on Aug. 26th, 1889, complaining of pain in the back and legs; and vomiting. He looks very ill. His present illness began on the 17th, with pain in the back and legs, vomiting, and headache, so that we reckoned the day of admission as the fifth day of the disease. His mother is phthisical. He is a tall, spare boy, has an anxious expression, lips and nails livid. Tongue covered with a thick white fur. The heart's impulse is very visible in the second, third, and fourth interspaces, and is distinctly peristaltic; the dull percussion extends to an inch and a half outside the nipple line, and reaches the second costal cartilage; sounds clear, second rather accentuated. There are numerous rose spots on the abdomen—which, however, has been rubbed with a liniment by his mother. There are gurgling, pain, and tenderness in the right iliac fossa. The motions are loose and of the usual pea-soup character. Urine acid, sp. gr. 1030, distinctly albuminous. Temperature 102°. He was placed on a milk diet, and ordered half a grain of calomel each day for four days.—24th (eighth day), 4 P.M.: Yesterday the temperature had reached its maximum since admission—viz., 103·2°; but since then it has steadily fallen to 100·8°, at 8 A.M. At 10 A.M. his pulse was 104, soft, weak, and fully dicrotic. At 11 A.M. he was put in the tank at a temperature of 90°. After this his temperature rose slightly, reaching 102° at 4 P.M., but it then began to fall. At 4.30 P.M. his pulse was 84, and improved in tension. Respiration quiet, and lungs healthy.—26th (tenth day): The temperature fell yesterday at noon to 97°, and rose in the evening to 99°. At midnight it had again fallen to 96°, and the temperature of the tank was then raised to 95°, and by 8 A.M. his temperature had reached 99°. The tank was again reduced to 90°. At 4 P.M. the temperature in his mouth was only 97° and pulse 60, so the tank was now raised to 95°, and maintained at that temperature. Tongue clean and moist; one loose motion to-day.—27th: Craving for food. Temperature about normal; from this date till the time he was taken out of the tank on Aug. 30th the highest record was 99·4°.—29th (thirteenth day): He is progressing very favourably. Pulse 84, small, compressible, and of moderate tension; tongue clean and moist; he complains much of hunger. Bowels rather confined, motions solid, pale yellow, and not very offensive. Allowed bread-and-butter. He was taken out of the tank on Aug. 30th (fourteenth day). The morning temperature remained normal, but there was an exacerbation of two or three degrees every evening till the twenty-third day of the disease. After his removal from the tank the frequency of his pulse increased about ten to fifteen beats for a few days. When his urine was examined on Sept. 2nd it was free from albumen. On the 20th he was placed on ordinary diet. The following are the records of his weight: Sept. 13th, 74 lb.; Sept. 27th, 78 lb.; Oct. 4th, 83 lb.; Oct. 11th, 86 lb. During his residence in hospital his medicine consisted of two grains of calomel. The patient was discharged on Oct. 11th, quite well.

CASE 3. *Severe case of typhoid fever; hypostatic congestion of the lower lobes of the lungs; sixteen days in tank; cure.*—Sarah K——, aged twenty, hawker, was admitted to hospital on Aug. 30th, 1889. This patient was in such a stupid lethargic condition that it was impossible to get any information from her as to the history of her illness, but it was elicited from her mother that eleven or twelve days previously she complained of loss of appetite, cough, and headache. She continued at work till a week ago, since which time she has been confined to bed and has suffered from diarrhœa with offensive motions. She suffered from sickness, and complained of pain in the stomach, she has been very thirsty, and has rambled much at night. She was under medical treatment for a few days before admission and received large doses of quinine. Her eyes are dull, countenance stupid and devoid of expression. Tongue exceedingly dry and deeply fissured transversely; skin hot and dry.

Temperature 104°; respiration quick and shallow; pulse 110, small, soft, dicrotic, and so very feeble as scarcely to move the lever of the sphygmograph. Over the lower lobes of both lungs percussion dull, vocal resonance and fremitus increased, breathing tubular, and a few crepitant râles in inspiration—in short, well-marked signs of hypostatic congestion. There are many distinct rose-coloured lenticular spots over the abdomen; tenderness and gurgling in the right iliac fossa. Spleen large. She was ordered milk diet, no medicine. She was placed in the tank at a temperature of 90°.—Aug. 31st: She is now (3.45 P.M.) sensible, although still very stupid and dull of hearing. She says she will be ill "a fortnight again Monday"—that is, she became ill on the 19th. Her breath smells very heavy and offensive. Tongue is becoming moist. Respiration 36. She says she is feeling better, but does not like "the wathur." Her temperature fell this morning to normal, and so the temperature of the tank has been raised to 98°. It will shorten my remarks on her temperature by stating that from this date till her removal from the tank on Sept. 11th (twenty-fourth day of disease), the morning temperature was usually about 99°, and the average temperature of sixty-three observations during this period was 100·6°.—Sept. 1st (3.30 P.M.): The patient is rather better to-day. The tank has been maintained as far as possible at a temperature of 95° to 98°. She is more sensible but still very deaf. Her tongue is moist and the cracks are less. The breathing is not quite so hurried; respiration 30; pulse 96, small, weak, and compressible, but tension better. There is slight cough but no expectoration. The percussion over both lower lobes still dull, but the breathing is less tubular and there are fewer râles. Her bowels were moved once this morning; motion light yellow in colour, semi-solid, and not very offensive. She did not sleep much last night, but has done so to-day. It seems she has never had a bath since infancy and does not now take kindly to the water. Ordered a grain of calomel.—2nd (fifteenth day): There is considerable improvement, though she passed a restless night. Tongue tremulous, fur more moist, cracks less. She is sensible, but still very deaf; she is nervous, and grumbles very much at the bath. There is great improvement in the lungs; the percussion is clearer, breathing less tubular, though respiratory murmur is still very feeble; there are fewer râles.—Sixteenth day: The patient spent a much better night, sleeping for the greater part of the time; but when awake she is not reconciled to her watery bed. She is still apathetic and deaf, but expresses herself that she feels "right enough." Tongue moister and slightly fissured, feels thirsty, bowels opened to-day. There is considerable improvement in the condition of the chest, percussion clearer, respiratory murmur fuller, and only very few râles. Calomel powder to be repeated.—Seventeenth day: Passed a very restless night, but has slept well to-day. Her general condition is better; respiration 26. Repeat calomel, and to have half a drachm of sulphonal to-night.—Eighteenth day: Slept well last night and during the greater part of to-day. She is progressing favourably.—Twentieth day: She continues to progress favourably. Her temperature is only moderately febrile; to-day it rose to 102·2° when she was taken out of the water to have the tank cleaned. Tongue coated with a moist creamy fur; bowels opened. She drinks freely. She sleeps very well at night, and has had no sulphonal since the night it was ordered. She is quite intelligent, but still highly nervous and rather deaf.—Twenty-third day: The temperature of the patient is maintained at a rather high level, having ranged for the last three days between 100° and 102·6°. The temperature of the tank, which has hitherto been 98°, is now reduced to 90°. Tongue moist, appetite good, bowels open; she looks very well and comfortable.—Twenty-fourth day: The temperature of the patient has fallen since the lowering of the temperature of the tank. Her grumbling to-day about the "cowld wathur" was so incessant that I complied with her request, and had her removed from the tank. She is now looking very well and her temperature (4 P.M.) before removal from water 99·2°.—Twenty-fifth day: This patient was taken out of the tank yesterday at 7.30 P.M. After this her temperature steadily rose till it reached 103·2° at midnight. To-day it is fluctuating between 101° and 103°. She is drowsy, more stupid, and very deaf, and the nurse reports that she has been delirious all day. Tongue clean, but dry and parched. Pulse 132, small and weak; respiration 30. She had a loose motion to-day; light yellowish, pea-soup appearance, and offensive smell. Her abdomen is not distended; seems rather tender on pressure, especially in the right iliac fossa. Splenic dulness measures six by five inches. Hepatic dulness four inches and a half in line of sternum. Percussion clear over the back, but breathing is rather harsh, and there are a few rhonchi. Ordered six grains of naphthaline and a half grain of calomel every four hours.—Twenty-seventh day: For the last two days her temperature has ranged between 101° and 104°, and it is now (4 P.M.) 104·2°. She is delirious; passes her urine and fæces unconsciously. Motions loose and offensive. Ordered to be replaced in the tank at a temperature of 90°.—Twenty-ninth day: Immediately after she was placed in the tank her temperature began to fall, and at 4 A.M. yesterday it had sunk to 98°. It has not since risen above 100°. She is quite sensible to-day, but not at all reconciled to her new quarters. Pulse 120, small and weak; respiration 20. Tongue moist. She complains of thirst. Eyes bright and clear. Motions loose, dark-greenish colour. Urine and fæces still passed unconsciously. She objects to the naphthaline, but says she does not mind what she takes if she only gets something to eat. The naphthaline was now stopped, and she was ordered half a grain of calomel and five grains of aromatic chalk, twice daily. From this time the progress was uninterrupted, and she was finally taken out of the tank on the thirty-first day of the disease, after having been immersed for two periods of twelve and four days respectively. The temperature now became subnormal, ranging between 97° in the mornings and 99° in the evenings.—Oct. 2nd (forty-fifth day): The patellar reflexes are exaggerated, and there is marked ankle clonus.—12th: Patellar reflexes about normal, only slight ankle clonus. The following are the records of her weight without clothing: Sept. 30th, 82 lb.; Oct. 7th, 85 lb.; Oct. 18th, 90 lb.; Oct. 25th, 94 lb.—Nov. 3rd: She is now, and has been for some time, quite well. All her organs and secretions healthy. Discharged to-day.

CASE 4. *Severe case of typhoid fever; cerebro-spinal meningitis; double otitis media; immersed in tank for eleven days; cure.*—Margaret O. B——, aged eight, was admitted to hospital on Sept. 16th, 1889. The patient is a spare, fairly healthy looking child, weighing 43 lb. She became ill eight days ago, with chilliness and pains in the stomach. She has been since in bed, and for some days has suffered from diarrhœa. She is now rather drowsy, apathetic, and slightly deaf. She is easily roused and gives intelligent answers to questions. Lips dry and cracked, sordes on teeth. Tongue rather tremulous, coated with a dry brown fur. Pulse 116, full, soft, and compressible. Respiration quiet. No rose spots to be seen on abdomen, but numerous flea-bites all over the body. Abdomen distended and tender, but no gurgling in right iliac fossa. Splenic dulness three inches by two inches and three-quarters. Heart sounds normal. Some bronchitic râles over the posterior aspect of both lungs. Skin dry and hot, temperature 102° in axilla. Motions very loose, offensive, and of yellow ochrey colour. Patellar reflexes absent. Milk diet.—Sept. 17th (tenth day): Temperature 102·2°; motions very loose, pea-soup character, and offensive. Urine 20 oz. in twenty-four hours, alkaline, sp. gr. 1015, albuminous.—Eleventh day: The temperature fell this morning at 4 o'clock to 99°, but has since steadily risen, and at 4 P.M. reached 104·6°. Diarrhœa profuse. Body hot and dry, extremities cold, and altogether the patient appears very ill. She was put into the tank at 8 P.M. Temperature of water 95°.—Twelfth day: After she was placed in the tank her temperature steadily fell, and at midnight had sunk to normal, and remained so till noon to-day, when it began to rise, and reached 102·6° at 8 P.M. Her temperature has hitherto been taken in the axilla, but while in the tank it is directed to be taken in the rectum. Pulse small and compressible, but not markedly dicrotic. Has a slight cough; respiration 24. She appears comfortable, and sleeps most of the time. The bowels are freely moved, but the diarrhœa has considerably abated since she was placed in the tank.—Thirteenth day: Patient not quite so well. Tongue is rather dry; pulse quicker (140), small and weak; and she is more fretful. Pupils large, face flushed, and rather purple. She is quite sensible. Tank to be lowered to 90° till her temperature falls nearly to normal.—Fourteenth day: Her temperature was 100° at 4 A.M., 101·4° at 8 A.M. It then steadily fell to 97° at 8 P.M. It was now decided that the tank should be kept at 95° during the night and 90° during the day. Her lips and tongue were moister to-day. Pupils not so large. She did not sleep well last night, and

coughed a good deal.—Sixteenth day: For two days her temperature had ranged between 98·4° and 100·4°. Tongue clean and moist; pulse 144, tolerably firm. Pupils slightly reduced. Sleeps well, but has cried herself hoarse when awake.—Eighteenth day: Tongue clean and moist; pupils moderately dilated. Pulse 144, fair tension. She has been found thrice with one angle of her mouth just under the water. Her head is much retracted on the spine. She is in a peculiar mental condition; cries continually with a widely opened mouth, varied by a dry cough and occasional eructations of gas. Refuses to answer any questions. Protrudes her tongue as far as possible, rotates it on its long axis, and then, closing her mouth, retracts it slowly doubled up between the teeth. She slept well last night. Cheeks not so flushed. Her temperature has been slightly higher, reaching 101°, yesterday and to-day. There is now evidently meningitis, and from the position of her retracted head it was not considered safe to leave her in the tank to-night, so she was removed at 6 P.M. Her net weight was then 36 lb., having lost 7 lb. during her nine days' residence in hospital.—Nineteenth day: The following is Dr. Wallace's notes of to-day. "Patient slept well last night, and was quiet after having been taken out of the tank, but was restless at times. She lies on her right side with the head retracted. Pupils large; face flushed; breathing pretty rapid and sighing, frequently interrupted by a short dry cough. She often opens her mouth widely, and protrudes her tongue. There is a considerable amount of frothy saliva in her mouth. She has not taken any notice of any person or thing since yesterday morning. She is thirsty. She passes both urine and fæces involuntarily, and there is increased diarrhœa. The abdomen is slightly retracted. There is great increase of both patellar reflexes, especially the right; and there is marked ankle clonus, which is long continued on the right side. The lower limbs are rather rigid, the thighs are acutely flexed on the abdomen, and the legs on the thighs. There are no deep reflexes in the upper limbs, which are rather rigid, and the forearms flexed on the arms. Just at this moment she protruded her tongue four or five times from her widely opened mouth, and turned her head slowly to the left and back again. Her eyes look mostly to the right and downwards, but are not fixed. Could not find the optic disc. Pulse 164, pretty firm; respiration rather rapid, but not easily counted on account of her almost constant cough." Her temperature rose to-day to 103° in the axilla. I ordered her hair to be cut and an ice-cap to be applied to her head, and to be given a powder containing four grains of compound ipecacuanha powder and six grains of salicylic acid every four hours.—Twentieth day: Dr. Wallace noted this morning that she slept quietly for several hours last night after taking the Dover's powder and salicylic acid. She asked several times this morning for drink, and answered a few questions with apparent intelligence; she lies quietly, with a rather vacant stare; her pupils are dilated. She does not protrude her tongue or turn her head about so much as yesterday. She rolls her eyes about a good deal, but will not now answer questions, though her attention seems attracted by the voice. There has been a quantity of pus discharging from both ears to-day; the right membrana tympani cannot be distinguished owing to the quantity of pus coming from the middle ear. The left tympanic membrane is much inflamed, and in the lower anterior quadrant is seen a recent perforation the size of a pin's head, from which pus of a very fetid odour flows. The reflexes are still exaggerated. Pulse 164; respiration tranquil. Dry powdered boric acid is used for the ears. At 3 P.M. I noted that the cerebral symptoms presented by this patient last night were found to have in part disappeared this morning, when Dr. Wallace discovered for the first time suppurative double otitis media, with perforation of both drums. The temperature has, however, been steadily rising, and at noon reached 103·6°. Her throat is not affected. The pulse is again becoming more frequent. She has now assumed a more natural position, appears intelligent, and occasionally replies to questions, or gives indications that she does not wish to be troubled. Her head is still very much retracted, the muscles of the upper limbs rigid, and the flexors so much contracted that the forearms are acutely flexed on the arms; the thumbs are adducted to the centre of the palms, and the fingers are flexed. The lower limbs are drawn up, the thighs flexed on the abdomen, and the legs on the thighs, and the feet are extended. Ankle clonus and patellar reflex still marked, plantar reflex increased, but the other superficial reflexes are barely if at all elicited. The liver is considerably enlarged, moves with respiration, and the lower margin can be seen just above the umbilicus. There were eight loose motions to-day. To continue the salicylic acid and Dover's powders. The temperature was 103·8° at 4 P.M., 103° at 8 P.M., and 99·2° at midnight.—Twenty-first day: Dr. Wallace noted: "Patient lies in the same position as yesterday, but the head is not so much or so persistently retracted. The patellar reflexes are difficult to elicit. Ankle clonus slightly marked on the right side, easily elicited, and long sustained on the left side. Patient has slept well all night and this forenoon, except when roused for her food and medicine, when she calls for her mother and answers simple questions. She does not now gape and protrude her tongue and cry. Her pupils are strongly contracted; there was a copious discharge from the left ear during the night; the perforation in the drum is not yet sufficiently large for the efficient drainage of the tympanum, though it is slightly increased since yesterday. The right tympanic membrane shows a large ovoid perforation. Urine and fæces passed involuntarily, but the diarrhœa has lessened. Three loose motions to-day, of a yellow colour, with bits of curd in them, acid in reaction, and not very offensive. The respiration is 20 per minute, deep, and slightly snoring. Pulse 140, fair tension, the upper limbs are not so rigid or so much flexed as yesterday afternoon." The temperature ranged between 99·4° and 102·8° to-day.—Twenty-second day: This patient seems improved since yesterday; she is intelligent, frequently calls for her mother; the cough is not very troublesome; respiration quiet; pulse 136; tongue moist; bowels open, motions light yellow and not very offensive. She lies on her side with her thighs and legs acutely flexed, the rigidity is rather less. Pupils normal. She is very much emaciated, and, notwithstanding the fact that she has lain on a water bed since her removal from the tank, bedsores are beginning to appear over the sacrum, trochanters, and elbows. Ordered to-day peptonised bread and milk, and to have ten grains of aromatic chalk powder with opium when the motions are very loose.—Twenty-third day: Dr. Wallace notes: "This patient continues to improve. The attitude is still one of flexion, the lower limbs being rigidly flexed, and any attempt to straighten them is attended with pain. The upper limbs can be easily straightened. It is difficult to estimate the patellar reflex owing to the firm contraction of the flexors. Ankle clonus hard to elicit. The threatened bedsores are not advancing. Patient has become quite sensible, and answers questions intelligibly. Her face is flushed; pupils rather small. She complains of pain in the right ear, and there has been copious discharge from both ears during the night. The tympanic membranes have lost their red congested appearance. She has still diarrhœa, and passes urine and fæces involuntarily. She slept moderately well last night, and takes her food well. The temperature reached 101° last night, being 2° less than the previous evening, and 3° less than three days ago. Pulse 112, good tension; respiration 20, tranquil. Percussion of right back clear; there are still some medium crepitations."—Twenty-fourth day: "At 3.30 yesterday afternoon the patient had a slight rigor, and at 4 o'clock the temperature was 104·2°. From this time it steadily declined, and at 8 A.M. it had sunk to 99·6°. She slept moderately well. She is now particularly sensible, and answers questions intelligently, but is a little drowsy, probably from opium. She complained last evening of pain behind the left ear, but there was no puffiness, and this was probably due to the angular pieces of ice, as she has lain much on the left side. The lower limbs are still rigidly flexed, and cannot be straightened without causing pain. Ankle clonus not obtainable. The upper limbs are more rigid to-day, the head is slightly retracted, and any attempt to passively flex them is attended with pain. The tongue is slightly furred. Pulse 132; respiration 20, slightly irregular, and accompanied by slight twitchings of the limbs. There is impairment of percussion note over the right back, and medium crepitations all over it. She complains of pain in the episternal notch when she coughs; there has been copious discharge from the left ear and slight from the right; the perforations of both drum membranes are healing up, that in the left being now only a narrow slit." The temperature was 102·4° at noon, 103·2° at 4 and 8 P.M. There were six loose motions to-day. Her net weight was now 37½ lb., showing a gain of 1½ lb. during the six days since she was removed from the tank. She was again placed in the tank this evening at a temperature of 95°. Her temperature at

midnight was 103·6° in the rectum. — Twenty-fifth day: She slept well all night, and is looking very well this morning, being very intelligent, and expresses herself as feeling well. Her temperature at 8 A.M. was 101·2°, the tank being 95°. It is now directed to keep the tank at 90° during the day and 95° at night. Her temperature to be taken in the rectum. Her attitude is still one of acute flexion, but the retraction of the head has disappeared. Pulse 124; respiration 24, tranquil. She did not cough much during the night, and there was only slight discharge from the ears. Only two motions to-day.—Twenty-sixth day: "This patient slept well all night; is very intelligent; cough less troublesome; lower limbs are distinctly less rigid, and the patellar reflexes can only be slightly elicited; no ankle clonus." The temperature was 103° at midnight, but sank to 99·6° at 8 A.M. It rose to 102° at 8 P.M. The average temperature to-day was 100·9°. There has been no diarrhœa since she was placed in the tank and only two motions to-day.—Twenty-seventh day: "The patient slept very well last night and coughed little; she says she feels well, and there is now no pain in the head. There has been no discharge from the ears. The limbs are rather more rigid than yesterday. There is no retraction of the head. Respiration 24, tranquil. Pulse 118. The temperature has fallen gradually since she was placed in the tank, and at 4 A.M it was subnormal for the first time for nine days." The average temperature to-day was 100·3°. Only one motion. Powders to be given every four hours as hitherto, but Dover's powder to be increased to six grains.—Twenty-eighth day: The average temperature up to 6 P.M. to-day was 100·3°. Only one motion. She was now taken out of the tank, as it was required for the sixth case in this series. Net weight 38½ lb., showing a gain of 1 lb. during the four days in the tank. The temperature ran up quickly after she was taken out of the water, and at 8 P.M. was 103·2°. She is placed on a water bed. Temperature now taken in the axilla.—Twenty-ninth day: She slept well last night, but is fretful and calls for her Uncle John. Pupils normal; tongue clean and moist; pulse 132, moderately full, soft, and compressible. She moves her arms more freely, and there is less rigidity; the lower limbs are still acutely flexed and rigid. She takes her food, which consists of milk and peptonised gruel, very well. Her temperature ranged to-day from 102° to 103·6°, average 102·7°. Two motions.—Thirtieth day.—"She did not sleep well last night. Since she was taken out of the tank her temperature had been maintained mostly between 102° and 103°. Takes her food well. Complains of slight pain at the back of her head. No discharge from ears. Tongue quite clean and moist. Her arms are quite mobile, and though her lower limbs are still rather rigid, they can with some force be almost completely extended. No patellar reflex or ankle clonus can be elicited. Respiration 19, calm; pulse 124." Average temperature to-day 102·6°. Two motions. Ordered custard pudding to be added to her present dietary.—Thirty-first day: This patient passed a very restless night, notwithstanding that she had ten minims of chlorodyne. This morning she is sleepy; pupils contracted. Her temperature, though still high, shows signs of falling. The lower limbs cannot yet be completely extended passively, but she can voluntarily extend them to a considerable degree for the first time for the last twelve days. Respiration 22; pulse 124. Complains of slight pain in the left ear; there is no discharge from either ear. Average temperature to-day 102°. No motion.—Thirty-second day: She passed a good night and his progressing favourably. Average temperature 101·9°; one motion.—Thirty-third day: "Complains of pain at back of head, there is free movement of upper limbs, and considerable voluntary movement of lower limbs. Bowels slightly confined. She was sick this morning after her bread-and-milk. Respiration 30; pulse 142. Coughs slightly." Average temperature to-day 101·9°.—Thirty-fourth day: "Slept well last night, and is rather drowsy to-day, uses her hands freely and can move her legs to a certain extent. Tongue clean; pupils rather small. Respiration 25; pulse 136, of fair volume and tension. She is tired of bread-and-milk, but drinks plain milk freely." Ordered potatoes and gravy, and two eggs. Average temperature to-day 101°; weight 38½ lb. net. Powders stopped.—Thirty-fifth day: "Patient slept very well. She has a pustular eruption on the head. Pupils contracted; tongue slightly furred. Lower limbs in same condition; gentle extension to be applied to them. Diarrhœa ceased for five days. Temperature subnormal this morning; respiration 14; pulse 100, of fair tension." The temperature ranged to-day between 97·2° and 101°; average 99·2°. Three motions. — Thirty-sixth day: Temperature ranged to-day between 97·8° and 101°; average 98·6°. Five loose motions. Powders resumed.—Thirty-seventh day: The elastic extension which was applied two days ago to the lower limbs has considerably extended them, but it is now producing a slight slough of the skin above the right ankle, and it is discontinued. The diarrhœa has ceased. She has taken her food better to-day than yesterday. Resperation 16; pulse 88, of good tension; temperature normal.—Thirty-eighth day: Patient slept well last night, and is taking her food well. The lower limbs are drawn up; they are not very rigid and she can extend them to a considerable extent. The patellar and plantar reflexes are active, but there is no ankle clonus. Average temperature 100°. Three motions. Powders to be given every six hours, instead of every four.—Thirty-ninth day: Slept well last night, feels well, and is very hungry. Syringing of ears discontinued. Pulse 88 firm; respiration calm; slight cough; average temperature 99·5°.—Forty-second day: Slept very well and feels well; she can almost fully extend her lower limbs. The knee jerk is rather active, no ankle clonus. She eats well and is very hungry; the sore over the sacrum looks healthy. Her net weight is 38½ lb., having remained constant for the past fortnight.—Forty-fifth day (Oct. 22nd): She was placed on ordinary hospital diet, and two pints of milk.—On Oct. 25th her net weight was 46¾ lb. From this time the progress has been uninterrupted.—Nov. 1st: weight 40½ lb.; Nov. 8th, 42 lb.; Nov. 15th, 45 lb. She is now quite well.

(To be continued.)

ABSTRACT OF THE

Milroy Lectures

ON THE

ETIOLOGY AND PREVENTION OF PHTHISIS.

Delivered at the Royal College of Physicians,

BY ARTHUR RANSOME, M.D., F.R.S.

LECTURE II.

IT is not unreasonable to expect that a study of the geographical distribution of phthisis would lead to the discovery of at least some of the fostering causes of the disease. In the different countries of the world the racial differences of the inhabitants are often so great, and the conditions under which they live as to climate, food, habits, &c., are so varied, that we might naturally expect to find some nations suffering more than others; nor are these anticipations entirely discredited by the result, though a much more thorough examination of statistics is required than might at first appear to be necessary. Many of the statistical compilations to which access is possible are open to objection on various grounds, but in a general survey such as I propose to make it may perhaps be permissible to make use of somewhat imperfect materials. At the first glance at the figures placed at our disposal it would seem as if the expectations with which we commenced our quest were doomed to disappointment, for the disease appears upon the death-roll of almost every nation; and even if some countries appear to suffer less than others, certain places within their boundaries are to be found in which the disease exists in more than average proportion. If we look at a map of the world, coloured to show the distribution of phthisis, it will be found with very few exceptions that the degrees of shading denoting variation of prevalence will serve also to denote variations in the relative density of the population in different parts of the globe. In proportion to the number of people aggregated together upon a given space of ground, so also is the rate of mortality from phthisis. The only parts of such a map from which the colour is entirely absent are the arctic and subarctic regions, deserts and high ranges of mountains where human beings are fewest. In all the chief cities of Europe, Asia, Africa, and America there is but little difference in the phthisis-rate, and what differences exist are not to be accounted for by differences in climate. Army and navy returns impel us to similar conclusions. At first sight we might hastily conclude that but little of value can be obtained from such a

research as this, except that the very universality of the disease connects it with the collection together of human beings; but this view would certainly be erroneous. It is already something to have ascertained that the disease may exist everywhere, under every sky, in country or in town, in all classes of society, in the palace and in the hovel, amongst the luxurious and well fed, as well as amongst the poor and starving; but much more than this can be deduced from the statistics at our disposal. If we analyse the returns of the disease, we shall find that it has its predilections, and by observing more narrowly its selection of favourite habitats and breeding grounds we shall obtain important indications that will guide us to the discovery of the conditions that determine its choice. We have already seen reason to conclude that the ancient doctrine of its origin in a damp changeable climate is erroneous; and if we take the extreme variations of the disease in places geographically close together, we shall find that they are so great and so frequent in different countries that they could not have been due merely to differences of climate. So also for different parts of the same country, Mr. Haviland's map of the distribution of phthisis in England and Wales shows that the dark-blue and dark-red spots, the antitheses of prevalence, are interspersed all over the map, and the same observation applies to other countries. If we come to still closer quarters and take the variations within the areas of counties, the same holds good. I have an analysis of returns from ten English counties, and in most of them the difference between the highest and lowest death-rate from phthisis is more than 50 per cent., and in some the highest reading is more than three times that of the lowest. The same variation is to be found in other parts of the United Kingdom, and has also been observed in Canada, Russia, Holland, Belgium, Germany, Italy, Portugal, and Egypt. But the strongest proof of the existence of causes much more powerful than climate in producing a tendency to consumption is to be found in the great differences between the male and female rates of mortality from the same disease in the same towns and districts. Taking the annual average proportion of deaths from consumption between the ages of fifteen and fifty-five per 100,000 persons living at those ages between the years 1861 to 1870, I find that in Cambridge, Whitechapel, Bath, Greenwich, Brighton, Southampton, Birmingham, Newcastle, and Salisbury the male rate exceeds the female rate; while in Sedburgh, Congleton, Bootle, Leek, Belper, Buckingham, Sevenoaks, Alston, Camelford, Battle, Pickering, and Billesdon the female rate is much the highest. These differences in the mortality of the male and female population of the same places prove that we cannot find in mere climate enough to account for the varying prevalence of consumption.

With regard to the causes of the existence upon the earth's surface of areas of immunity from the disease, which may be grouped broadly as deserts or sparsely populated places, mountain ranges or high plateaux, and arctic or subarctic regions, it is not surprising to find that consumption is rare in the first of these, for where there are few human beings it is hardly likely that there will be much disease; but it is not merely the scarcity of possible victims that makes the disease uncommon, for the proportion of cases to the number of inhabitants in these districts is also very low, so far as we can judge from the imperfect data at our command. There are, however, certain considerations, apart from the wide separation of these districts from one another, that prevent us from ascribing this freedom from the disease altogether to the climate; for these spaces are often bordered by regions where the disease is much more frequent, and in many parts of the world formerly almost free from it it is rapidly increasing in prevalence. The climate in these regions has not changed, but the conditions under which life is carried on have altered. In the second group of districts free from consumption, in those parts of the earth elevated to a certain height above the level of the sea, the elevation itself to some extent seems to be a safeguard against consumption. The degree of elevation conferring this immunity was supposed by Gastaldi to be about 2000 feet; but in Western Texas, at a height of 2100 feet, consumption is not uncommon, and the same observation has been made respecting other elevated plains. It has been conjectured also that the freedom from the disease was due to the greater rarity of the atmosphere at these heights; but it must be remembered that the population of these elevated regions is much less dense than that of the lower ground, and that the air in consequence is much less polluted with organic matter. Dr. Mavart's recent observations upon the influence of altitude upon human respiration may throw some light upon the advantage of high levels in the treatment of phthisis; for he proves that the volumes of air required to yield the oxygen necessary for the production of a given weight of carbonic acid are smaller on mountains under diminished pressures than in the plains under high pressures, and he concludes that the respiratory function is therefore carried on more perfectly on the heights. That the immunity is not simply due, however, to the rarity of the air is completely proved by Dr. Emile Müller, who shows that in Switzerland there is no complete immunity of the mountaineers from the disease, a certain proportion of the inhabitants dying from phthisis, the rate depending not upon the elevation of their dwellings, but the nature of their occupations, so that once again we are obliged to fall back upon the conditions of social life as a much more powerful factor than the influence of climate or locality. Closely allied to this point is the question of the influence of soil. Places situated upon a damp, impenetrable soil have been shown to be much more subject to consumption than those placed upon a porous soil, and good drainage has been found to diminish the prevalence of the disorder by as much as 50 per cent. In those instances where diminution has followed, hereditary predisposition has made no difference in the result; for many have been found in such populations whose parents or near relatives have died of the disease, and yet they themselves did not contract it so long as they lived on the porous soil. And yet there is no necessary connexion between dampness of soil and consumption, for the mortality from phthisis has been known to rise after the ground has been drained, and there are in different parts of the world large tracts of country that are excessively damp, many of them indeed wholly given over to malaria and intermittent fevers, and yet these districts are so free from the prevalence of consumption that some continental writers have supported the erroneous view that ague is antagonistic to phthisis. The influence of dampness of soil is probably one simply of predisposition, and favourable only to the development of the micro-organism when introduced by other means.

The last group of districts to a great extent exempt from consumption consists of the arctic and subarctic countries. We do not know why extreme cold should be antagonistic to consumption, and the fact is entirely opposed to the notions of our forefathers on the subject. We may indeed surmise that the lower amount of humidity in the atmosphere of these regions may have something to do with the result. Cold air has a much less capacity for aqueous vapour than warm air, and it may be thus less capable of sustaining the life of the bacilli; or, again, it is possible that there are smaller quantities of organically charged vapours issuing from the ground, frozen as it is for so large a portion of the year, and in a frosty air the condensed moisture may entangle the organisms in its meshes and may carry them down out of harm's way. The countries also are so sparsely populated that there is comparatively little respiratory impurity constantly floating in the air. Just as it is possible for men to override the beneficial influences of an elevated site, so in cold climates also they may, like the Esquimaux, live under such ill-ventilated and crowded conditions that will lead to consumption as certainly as in less favoured countries. These facts, again, point to other conditions much more important than that of climate alone.

It is not surprising that at one time tubercular disease should have been ascribed to malnutrition, and there are still medical men of eminence who attribute to this cause the chief part in preparing the body for the reception of the bacillus. No one can doubt that want of sufficient food and mental distress are powerful agents in preparing the ground for the successful sowing of the seeds of consumption; but statistics are forthcoming to show, even before the bacillus was known, that these causes are by no means essential to the production of the disease. So also with hardship, exposure to the weather, and cold; these conditions might rather be said to be antagonistic than favourable to the onset of the disease. The poor fishermen of Iceland, the hunters and trappers of North America, escape the disease almost entirely, whilst one-third of the deaths of the well-cared-for adult inhabitants of towns are from this cause. It is very doubtful whether exposure to the elements, taken alone, is a common cause of inflammatory attacks of the respiratory apparatus; we do not find that men who are much in the open air and exposed to all vicissitudes

of weather are especially prone to catarrhal affections of the lungs, whereas the inhabitants of towns not only contract such diseases, but die of their consequences in excessive numbers. At Manchester people die of these complaints at more than three times the rate that people do in breezy Westmoreland.

But a close inquiry into the figures laid before us gives not only negative but positive information as to the secondary causes of consumption, and we may safely draw the following conclusions from them: (1) that the occupations of a people have an important influence over the disease; and (2) that its fatality increases with the herding together of poulations in large towns. There can be little doubt as to the indications given by our figures respecting the injurious influences of certain occupations in predisposing to lung disease and ultimately to consumption. Dr. Headlam Greenhow, in his report to the Privy Council in 1858, pointed out the influence of occupation as a cause of pulmonary disease, and later he followed it up by two admirable special reports. It will be sufficient to summarise his conclusions as to the conditions that render workpeople peculiarly liable to these diseases by arranging them under four principal heads: (1) the inhalation of dusts of various kinds; (2) stooping postures at work; (3) exposure to changes of temperature; and (4) bad ventilation. Dr. Greenhow grouped together all forms of disease of the respiratory organs doubtless to avoid errors of diagnosis, and in considering the etiology of phthisis we are bound to follow the example of this caution and to decline to accept the figures placed before us as relating to tubercular disease; it is also needful to attempt to distinguish between the direct effects of the occupation and those of the ordinary modes of life of the worker. As to the inhalation of dusts of various kinds, it is certain that the disorder at first produced is not true phthisis; but simply a lesion from mechanical irritation of the air passages; this may lead on to emphysema or to hardening and contraction of the lung tissues, and ultimately to their destruction in a way difficult to distinguish from true consumption. All dusts are not equally hurtful; the sharpest and most irritating are those that tend most surely to produce lung disease. The hardest and most pointed, such as steel and flint, are the most baneful, and after them come fine cuttings from bristles and the spicula of glass and porcelain, whereas the dust of flour and the delicate fibres of cotton and wool do but little harm. With regard to the mortality in Prague amongst different trades, Eulenberg gives the order of phthisis mortality as follows: bookbinders, goldsmiths, glovemakers, stonecutters, printers, turners, waiters, forgemen, locksmiths, bakers, joiners, potters, barbers, coopers, musicians, braziers, shoemakers, varnishers, tailors, furriers, weavers, masons, butchers, brewers, tanners, mountaineers, gardeners, millers, room-decorators, ship-builders, and coachmen. Differences are found between several sets of statistics which are probably due to variations in the conditions under which the several classes of artisans did their work; they add to our reluctance to receive the figures as evidence of the influence of the occupations themselves.

The next great exciting cause mentioned by Dr. Greenhow is the interference with the respiratory apparatus by posture, and he adduces as evidence the heavy mortality of the women and girls employed in the lace and hosiery finishing and winding rooms at Nottingham, the watchmakers of Coventry, and the hand-loom weavers of Macclesfield and Leek. It is, again, difficult to separate the operation of this condition of work from other influences adverse to health, such as insufficient food and bad air, and it is a fact that hunchbacks are but seldom affected with lung disease.

In connexion with exposure to variations of temperature and moisture, Dr. Greenhow points out the peculiar liability of slip-makers in potteries and of spinners of flax to pulmonary disease, but these conditions can only be very remotely implicated in the causation of phthisis. There can be no doubt that working in ill-ventilated rooms, the last of the conditions mentioned by Dr. Greenhow, is the most powerful of all the predisposing causes of consumption. Most, if not all, of the conditions that have been found to lead to consumption have had associated with them air rendered impure by breathing and allowed to stagnate through the want of proper ventilation. In proportion as the male and female populations are severally attracted to in-door branches of industry, in such proportion, other things being equal, are their respective death-rates by lung disease increased. The greatest range of difference between the male and female death-rates is to be found in the agricultural districts, where the men are mostly employed out of doors and are but slightly affected, whilst the women are engaged at home and die of consumption at twice the rate of the men. Where many persons are employed together at any in-door industry the ventilation of the workplace is likely to be so bad as to convert the employment, which is perhaps not in its own nature of hurtful tendency, into an employment seriously dangerous to health.

Statistics thus lead inevitably to Dr. Greenhow's second proposition—that the fatality of lung disease increases with the herding together of populations in large towns; the truly infective impurity of the air must be in some sense a respiratory impurity. The specific organism has been discovered in the air of consumption hospital wards, in dried-up phthisical sputum, and in the aqueous vapour exhaled from phthisical lungs; the disease, therefore, must be mainly derived from this source, and the concurrent testimony obtained from the geographical distribution and from the mortality amongst workpeople shows that the power for evil of the disease germ increases *pari passu* with increase in the density of the poison. The ravages committed in the ranks of the army by pulmonary disease are to be traced in a great degree to the vitiated atmosphere generated by overcrowding and deficient ventilation of barracks. Much additional evidence is to be found of the influence of re-breathed air in the production of phthisis drawn from the history of prisons, gaols, and workhouses.

We may push our investigation into still closer quarters, and examine into the mortality of certain districts and even of certain houses. Two years ago, when investigating the incidence of phthisis in some of the worst districts of Manchester and Salford, I showed that the close courts and alleys, the shut-in or blocked-up lanes, and, above all, the houses built back to back, with no through ventilation, were the most affected. In some cases, within five or six years, double or treble occurrences of the disease had taken place in the same houses, and these results have been confirmed by other observers. Dr. Flick of Philadelphia, as the result of an elaborate topographic study of phthisis in that city, comes to the following conclusions: (1) that a house which has had one case of consumption will probably have another within a few years, and may have a large number in close succession; (2) that when a case of consumption occurs in a house, approximate houses are considerably exposed to contagion; (3) that houses in localities where endemic after endemic has existed have, nevertheless, escaped the disease; (4) that tuberculosis of different kinds occurs in the same localities and often in the same lots as consumption; (5) that during twenty-five years scarcely 20 per cent. of the houses of the ward were so affected. He ascribes these results to contagion in the houses themselves, and these facts must be placed in apposition with the researches upon the bacillus-holding properties of the walls of houses in which consumptive patients have resided.

TROPICAL LIFE AND ITS SEQUELÆ.

BY SURGEON-GENERAL JEFFERY A. MARSTON, M.D., C.B., M.R.C.P., &c.

PROFESSOR VIRCHOW, in his address before the Congress of German Naturalists and Physicians at Strasburg, in September, 1885, called attention to a sphere of research in which, he alleged, neither the French nor the English had hitherto accomplished anything of importance—namely, the modifications of the organism, and particularly of the special alterations of each organ, connected with the phenomena of acclimatisation.

Whether Professor Virchow's estimate of English or French labours in this field of scientific investigation be correct or not, the subject is one of much importance from a political and scientific point of view; and it is full of practical every-day interest to a country like England, in constant communication with India and the colonies, with the consequent interchanges of climate that are nowadays taking place among the inhabitants of the British Empire. The problem, as stated by Virchow, embraces, however, a very extended field of inquiry; and even its approximative solution, supposing the materials for it to exist, would involve a considerable expenditure of labour, time, and space. In order to circumscribe the inquiry within the

narrower limits of special interest to the medical profession, I propose to gather up and summarise, as succinctly as practicable, such impressions as have been derived from my own observations and experience. Still, it seems necessary to say something on the general, as introductory to a consideration of the special and limited, aspect of the question.

The subject is, as I have said, not without practical interest, and, by way of illustration, it may be remarked that changes incidental to the action of various climatic and seasonal conditions are not sufficiently taken into account. With a large number of persons returning from a tropical climate, for instance, in ill health, or in different degrees of depressed health, time is an essential element for their recovery, apart altogether from the exhibition of drugs. It is the experience of all travellers that change of climate is followed by a certain amount of change or disturbance of the physical health—sometimes of a favourable nature, sometimes the reverse, and frequently of an insignificant kind; but we are sensible of the change, nevertheless. On the arrival of an immigrant in a new climate, whether it is to agree with him or not, his organism appreciates and probably manifests some difference until it is again in equilibrium—that is to say, until, by a new adjustment, as it were, in the play of his animal mechanism to the new conditions, his constitution accommodates itself to them. From such small beginnings it is easy to trace our way up to those greater, more slowly induced, and more appreciable modifications, the aggregate outcome of which is embraced in the term "acclimatisation." When a young soldier lands in India, we may observe the effects on the human body of changes incidental to the different periods of its own development, together with those incidental to the action of climatic conditions; and similarly, on his return home, the changes brought about by a different environment.

It has been doubted whether there is any such process at work at all as is comprehended in the term "acclimatisation" in the case of an individual newly arrived in a foreign climate, except that which is comprised in the gradual physiological and structural modifications slowly induced in the races of men and animals by climate; whether, in fact, individuals who survive the changes prejudicial to health do not do so by their constitutional powers of resistance to such changes rather than by their adaptation to them, representing the operation of the law of survival of the fittest, the interval through which they have passed being characterised as a process of "seasoning." Be this as it may—and it must obviously be very difficult to draw a line of demarcation between conditions which would form the proper study of the naturalist and physiologist on the one hand, and those which would bring them within the purview of the practical pathologist and physician on the other—it is the latter which more directly concerns us. It is the increased susceptibility to disease or vulnerability of constitution engendered by the unstable state of the system whilst it is accommodating itself to its new surroundings, and the dominating influence of old climatic conditions and habits whilst these still persist, that are of medical moment.

It is pretty well known that the Semitic peoples possess a power of acclimatisation, or adaptability to climate, superior to that enjoyed by the Aryan races; and among the latter the inhabitants of the South, the Spaniards, Portuguese, Maltese, and Sicilians, are superior to those of the North. Next to the Jews, the gipsies are the most cosmopolitan. The admixture of a foreign blood in a remote past confers a resistance to the prejudicial effects of climate; and half castes also, if a degenerate race, manage to survive. It is not very easy to say how much of the excess of mortality of Europeans in tropical countries is of an inevitable kind, and the effect of climate uncomplicated by malaria, or how much it could be reduced by improved sanitary laws and improved personal hygiene and habits of life. Contrast the following with the present state of things in India. In 1865 a gunner belonging to the Royal Artillery depôt was about to be discharged the service. He applied to have thirty shillings, which had been stopped from his advance of pay on embarking for India, refunded, as he had not required his coffin nor incurred any expense for his funeral obsequies. The matter was referred to the India Office, the soldier's claim was found valid, and the sum was refunded. It appears that we are consequently within measurable distance of the time when the mortality among troops arriving in India was so great as to require the Government to safeguard itself against the expenses attending soldiers' funerals.

What are the causes or conditions which produce the deterioration of health, the degenerative and other changes, and the sequelæ and more remote effects of disease noticed in Europeans who have resided in tropical or subtropical climates, and how should they be treated? The effects of the direct influence of the sun's rays have not yet been scientifically and exhaustively determined. It would appear that if the heat of the blood of vertebrata exceeds 113°F. the myosin begins to coagulate; and that the effect of an increased temperature applied to nerves causes the electrical currents through them to be lessened, and finally to stop; and if the nervous currents be interfered with the vessels and amount of secretion, on any hypothesis of the relation of the nervous system to the phenomena of heat, must be interfered with too. The pulmonary function is diminished, and with it the elimination of carbonic acid and water in those subjected to heat—at any rate, according to the experimental observations of most authorities; and the heart's action under great heat is increased. The skin acts much more freely, its increased physiological function often giving rise to "prickly heat" and boils; and the amount of urine is diminished in a remarkable but varying degree, inversely as the action of the skin. In addition to the positive results of Rattray's observations, it is a matter of everyday remark that youths increase in height but lose in weight, colour, and strength in the tropics. I am not acquainted with any reliable data for estimating the amount and condition of the liver-work in tropical climates.

The most reasonable explanation of the cause of the blackness of the skin of the tropical man has been afforded by my friend Surgeon-Major Alcock in his paper on the subject published in *Nature*—viz., that it is to protect the peripheral nerve terminations against undue excitation by light, and not against heat, for its properties in this respect would obviously be unfavourable in proportion to the depth of skin colouring. We use smoked glass in looking at a solar eclipse for a similar purpose—to protect the retina.

We have to notice: the effects of exposure to climatic heat on the nervous system, as illustrated by repeated observations on officers and others appearing before medical boards; anæmia and increased "wateriness" of blood, in varying degrees, from that commonly witnessed after any ordinary illness up to conditions of tropical anæmia, mimicking very closely that known as pernicious anæmia; the condition known as "psilosis" or "sprue" and its allies, some cases of which improve on, and can only be cured by, strict adherence to milk diet, and others which do not, but are rather injured by it; some curious forms of chronic gastro-intestinal disorder, attended with stomatitis or a condition resembling scurvy, but not attributable to the absence of vegetables or curable by the employment of any special article of diet; and, lastly, cases of malarial cachexia, together with morbid conditions of the liver and spleen.

As regards the effects of heat on the nervous system, there is no need to dwell upon the distinction that should be drawn between heat exhaustion, heat stroke, and heat apoplexy; or upon the efficacy of temperate living, good ventilation, clothing light in colour and in weight, and so loose-fitting as to admit of the freest respiration and perspiration and sufficiently permeable to the air to allow of the removal of the heat accumulated beneath it. It is the sequelæ that concern us, such as the tendency that is acquired to the occurrence of increased and erratic temperatures, insomnia, loss of "nerve," acute neuralgic headaches, and other neuroses, the inability to take any alcohol without undue excitement or headache, and occasionally, though rarely, even short attacks of mania. If a man has suffered from any form of sunstroke, or even if he has served continuously for some time in a tropical or semi-tropical country, or been exposed to great heat, as was the case with our troops in Egypt and the Soudan, he is very likely to manifest many curious and more or less distressing neurotic symptoms. For instance, I have known young men after a return to England from those climates complain of insomnia, great depression of spirits, proneness to emotion, to an irritability or mobility of the nervous system, attended with great loss of "nerve," and this state would perhaps be accompanied by some tremor of the lips, tongue, and the facial muscles of expression in talking or describing their symptoms. A man would allege, for instance, that he could not concentrate his attention or take any interest in anything; that he would go through a picture gallery without being able to

recall any painting he had seen there, or attend a theatre and be unable to follow the plot of a play or recollect the characters in it; that he was afraid to cross a street in front of an omnibus; that the noises of London or of a railway station distressed and confused him in a way they had never done before; that, although a good horseman, he was afraid to ride; that he was irresolute and nervous, liable to headaches coming on suddenly and often without apparent cause, and disappearing as suddenly; that he had to avoid the heat of the sun, crowded rooms or theatres, and was easily fatigued; that a trifling excitement gave rise to palpitation, and that, in effect, his inhibitory nerve centres were enfeebled, and no longer under his control. Sleeplessness was commonly complained of; the patient would assert strongly that he never slept, while his relatives possibly urged that he did—more than he believed. But refreshing sleep depends much more upon its quality than its quantity. The patient probably slept lightly, or if the consciousness to external impressions were lost or dulled, still some centres were active and automatically "functionating" in a train of thought of which the subject was dimly conscious all the while. There was often either no physical cause or no adequate cause apparent; the sufferer was not wasted or markedly anæmic; his appetite was good and his general health also. In many cases, however, there was something wrong with the health, generally of the nature of dyspepsia with some anæmia, and in some of them the amount of urea in the urine would be found to be increased. In some cases, moreover, especially in those in which malaria forms a factor in their medical history, neuroses are common enough, the liability to them diminishing according to the length of residence in this country. In the case of three officers of my acquaintance returning about the same time from service in India or Egypt, two suffered from "shingles," preceded and followed by severe brachial neuralgia, and one from this form of neuralgia for some months without any concomitant skin affection.

An officer of gouty diathesis, who had been invalided from the Mauritius from the effects of malarious fever, suffered from various anomalous symptoms of depressed health, all of which were, in my opinion, entirely attributable to malaria together with the acclimatising effects of a change to a new climate. He consulted different physicians and surgeons of eminence. At one time he had symptoms referable to his heart, at another to his spine, and he remained in bed at perfect rest for many weeks at the suggestion of a consulting surgeon, under the assumption that he had disease of the spinal column; and later on he was told and was himself convinced that he had some disease, probably tuberculous, of the lungs. Time was the main element in his cure, and in two or three years after his return from the Mauritius he had quite regained his health and strength. Sciatica is also not at all uncommon. It is well known how very frequently the subjects of Mediterranean forms of fever (including enteric fever) are attacked with a peculiar kind of rheumatism, in which the neuralgic element preponderates; but I have seen cases in which symptoms resembling those of locomotor ataxy were present, or other morbid conditions referable to spinal cord trouble, which were doubtless attributable to malaria. At any rate, they completely disappeared in time, and with remedies prescribed on that assumption. Two cases of paralysis or paresis implicating the nerves of the eye, and giving rise to slight squint or double vision, were under my care, in which the absence of any history of syphilis or of any central nervous affection led to the belief that the lesion, whatever was its exact nature, was attributable to malaria to which they had been exposed. They both recovered.

In connexion with this subject of disordered innervation, that of perverted heat function is intimately associated. This field is a tempting one, but too wide to enter upon here, seeing that Dr. Ord, in his extremely interesting and suggestive paper on the Causation of Pyrexia, has had recourse to experimental observations connected with thermometrical phenomena manifested by growing plants and ripening fruit for the purpose of elucidating constructive and destructive metabolism in our own bodies when supplemented by the dominating influence and *rôle* of a nervous system. Be the explanation of the relation of the nervous system in the causation of pyrexia what it may, there can be no doubt of its being an important factor. I have seen quite a large number of cases of fever—uncomplicated fever—which could not properly be assigned a place in the published official nomenclature of disease. The increased heat apparently constituted *the* disease, and it went on from day to day and week to week with a sort of regularity that was monotonous, nor was it necessarily correlated with an increased pulse ratio. Patients, after having manifested in hot climates, even for months together, a range of temperature above the normal, have continued to do so, in many cases after return to a temperate or cold climate. Of course, in those coming from India the phenomenon may have been due to a malarious form of fever or to the action of a malarious element; but in the case of persons returning from Egypt, Malta, and Gibraltar, where ague and malarious fever are certainly not commonly prevalent, this explanation will hardly suffice; and it is a noteworthy fact that, judging from my own experience, neither quinine nor arsenic exercised any curative or beneficial influence. Frequently muscular rheumatism, sciatica, intercostal, brachial, or facial neuralgia, and occasionally orchitis or inflammatory enlargement of some of the lymphatic glands appeared, and retarded the patient's convalescence.

I have seen many cases of officers and men who, after their return from Egypt, the Soudan, Mediterranean, or India, have been liable to erratic and abnormal temperatures of temporary duration, provoked by trifling exciting causes, or by none at all, that could be traced at least; and the individual was often not himself even aware that there was anything wrong with him, apart from the evidence afforded by a clinical thermometer. If a patient be anæmic, he may even feel better on the days on which there is an increase of temperature than on those during which it is normal. In the case of a lady I saw in consultation in Egypt we found that she invariably declared herself to be "quite well" on the days of increased temperature and "not feeling well" and complaining of headache on those of normal temperature. The explanation was, I suppose, that the increased force and frequency of the circulation under the excitement of fever served to compensate for the anæmia and feeling of depression otherwise present.

In the treatment of these cases one great thing is time—time during which the system is accommodating itself to a new environment, and gradually shaking off, as it were, the effects of prejudicial climatic conditions to which it had been previously habituated. The medical treatment mainly consists in finding out what is wrong, and for that purpose it is necessary to tap at the door of every organ. The more the patient is in the open air the better, and a sea voyage, a trip to the north of Europe or Scotland, may do good; but residence at the seaside, particularly in a relaxing place, generally does harm, notably in cases where there is an inactive liver. The patient feels mentally jaded, and to secure sleep he requires to go to bed physically, and not mentally, tired. Sometimes, when the bowels are irregular, and there are slight dyspeptic symptoms attended with flatulence, an ordinary dinner pill or frequent small doses of mercury (the tenth of a grain of calomel) will do more to procure sleep than all the opiates in the world. The indiscriminate use of narcotics or sedatives, or that of tonics, is often very injurious.

If the patient is anæmic or has a malarious history, but no organic disease, and a clean tongue, the use of quinine, arsenic, and iron is indicated; and Bland's pills (if they do not irritate) are an excellent preparation, or a mixture of the perchloride of iron and arsenic, or Easton's syrup may be used. If the patient is physically restless at night—constantly changing his position—a combination of the bromides of sodium and ammonia with hyoscyamus proves very useful; but when there is depression of spirits bromides have generally an injurious effect. The diet should be varied, simple, and wholesome. Beer and spirits are better avoided. Burgundy and the Australian wines are preferable, and generally agree. Fresh fruits of almost any kind are useful, if not taken at night. The condition in which some of these patients find themselves is more distressing than is commonly imagined, and out of all proportion to its danger or gravity; the sufferers are often thin, jaded, and anæmic-looking, introspective and depressed, but they almost invariably recover in time. Every temperament is liable to go down before these climatic conditions, but those of a nervous or nervo-bilious temperament suffer most; and it is needless to remark that pleasant and cheerful society helps them over the time necessary for their recovery. The remaining conditions of ill health arising from tropical life are more serious, and have still to be considered.

(To be continued.)

TYPICAL CASES OF IMMEDIATE REDUCTION OF DEFORMITY AFTER TENOTOMY.

BY NOBLE SMITH,
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IN a correspondence which took place in THE LANCET some months ago regarding the position in which the parts should be placed after the operation of tenotomy, I proposed to furnish records of some cases treated by immediate reduction, that correspondence having shown that opinions were not unanimous upon the subject. The following instances are selected from among many others similarly dealt with. All the cases which I have operated upon have been successful—that is to say, there has invariably been a perfect union of the divided tendon, the function of the muscle

FIG. 1.

Outline copied from a model of the foot taken before the operation.

FIG. 2.

Outline from a model of the foot taken after the operation.

(when not totally paralysed) has always been improved, and, in short, all the benefits of tenotomy have been obtained without any drawbacks. The advantages of this method of procedure are: first, that it allows exact adjustment of the displaced part to a natural position, or (in cases where the resistance of other structures prevents it) to as near such position as possible; secondly, that the after-treatment is very much simplified, so that the apparatus required need not cost a quarter as much as, and the visits to the surgeon need not be much more than a tenth of the number necessary, under the old system. I have selected these particular cases because they are instances in which the supposed

FIG. 3.

Copied from a photograph

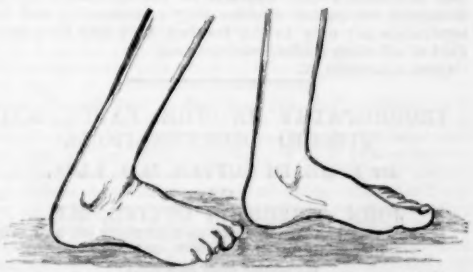
obstacles to successful treatment by immediate reduction specially existed.

CASE 1.—J. M——, aged nineteen, male (Oct. 1883). Severe equinus of the right foot existing from infancy. The patient had never been able to place the heel on the ground in walking. The operation was performed by dividing the plantar fascia first, and subsequently section of the tendo Achillis, the ends being separated to the extent of over two inches. The result was perfect union.

CASE 2.—H. A——, aged thirteen (November, 1886). This patient walked badly as a baby, but got worse when between four and five years of age. For the last three years he has only been able to walk with crutches. He had to be propped up for taking a photograph. On Dec. 10th, 1886, I divided the tendo Achillis of the right leg and brought the foot into a natural position (at right angles with the leg). Ten days subsequently I showed this patient at the Medical Society. The tendon had already united tolerably firmly, although the separation had necessarily been considerable, as may be judged from the photographs. The patient was able to stand on this leg while he raised the other (which remained deformed). I subsequently operated upon the heel of the other foot, and the tendons of this also soon united firmly. In November, 1888, I examined both feet, and found the tendons and muscles remaining perfectly normal and strong. The patient could point his toes firmly against my resistance with the hand, and could raise the toes to a natural degree of flexion.

CASE 3.—H. D——, aged seven. This was a case of con-

FIG. 4.

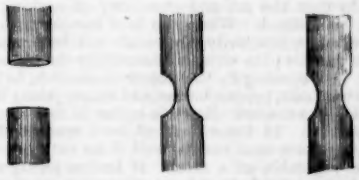


From a photograph taken after the second operation, both heels resting on the ground. He was standing upright easily without any support.

traction following paralysis of the flexors of the foot. The deformity was not quite so severe as in Fig. 1, but the tendon was equally rigid. Immediate reduction of the foot to a normal position followed operation. Perfect union of the tendon took place, and the patient was able to walk about with a support in a fortnight. Two months afterwards the foot remained in a normal position and the tendon was acting perfectly naturally.

Were it necessary I could give many other similar cases, but it would be only taking up space unnecessarily. The union of the cut ends of the tendons has in all cases taken place rapidly. I operated on Miss B——, aged fifteen, on Jan. 28th, 1886. The separation in this case was not great. Fig. 5 represents the cut tendon. On Feb. 1st the tendon felt as represented in Fig. 6. On Feb. 12th it was as in Fig. 7. I then put on the boot with a side steel and a fixed

FIG. 5. FIG. 6. FIG. 7.



joint at the ankle, and allowed the patient to walk about the room a little. Feb. 15th, only a very slight indentation could be felt at the place of operation. This patient gave up the use of all supporting apparatus at the beginning of June, 1886, and in April, 1887, she remained perfectly well. In the autum of 1889 I heard that the functions and appearance of the foot remained perfect.

Where the separation of cut ends is greater the union occurs in the same way. In some cases, however, the union is slower, a gap being felt for some weeks. In all cases, however, the progress is that of a gradual thickening of the uniting material, the cut ends retaining their relative position, and *not* approaching nearer to one another. In all cases it is, of course, very necessary for the patient to wear a supporting apparatus for a time. It is the use of such

help which enables us to allow the patient to walk about safely so soon after operation. When the plan of gradual reduction is adopted, it is necessary or customary to use an apparatus with a rack joint at the ankle, and by means of this joint the foot is gradually screwed up to a normal position, or as near to that as the nature of the case will permit. When this rack joint is no longer required a new joint, or even a new instrument, is necessary, allowing some freedom of movement; but for many months after operation it is desirable to have a stop joint to prevent recontraction. By adopting the direct plan, much of this expense and trouble may be avoided. I now use a very simple apparatus, allowing a tolerably free movement at the ankle, of whatever particular range of motion I think the case will require at the end of the first month or six weeks, and then a peg is inserted to fix this joint. Upon removal of the peg when the tendon seems strong enough to allow it, the instrument is converted from one with a fixed to one with a movable joint. This system of simplification of operation and simplification of apparatus lessens the tediousness and expense of the treatment of permanently contracted muscles very considerably, and it is applicable not only to the treatment of club-foot, but to that of all other similar contractions.

Queen Anne-street, W.

TROPHOPATHY IN THE FATTY AND FIBROID DEGENERATIONS.

BY EPHRAIM CUTTER, M.D., LL.D.,
AND
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(*Concluded from page 536.*)

STATEMENT OF PRINCIPLES OF THERAPEUTICS.

1. ALL cases of serious chronic disease which come under our care are usually placed on a rigid diet of beef, from the top of the round, which is freed either by hand or the use of the American or enterprise choppers from all fat and connective tissue. The resultant is the pure lean muscular fibre, which is moulded by the use of a knife and fork and broiled, served to the patient on a hot-water plate, and seasoned with pepper, butter, and salt. In some cases, especially of fatty degenerations, butter is not allowed. Too much care cannot be taken in the selection of the beef and in its preparation; the hand should touch the meat as little as possible, as the human animal heat changes the character of the muscle pulp. It is an art to prepare and broil the meat rightly; some mould the cakes too finely, and the resultant is not good for the patient. No physician or nurse should consider it an easy thing to prepare this beef properly. It is hard work to make patients live on right diet; hence all the help that the art and chemistry of cooking can give should be utilised. When the beef has been manipulated and broiled satisfactorily, the result will be a cake of meat of pure muscle; its outside thoroughly done and of dark colour. On opening it, the colour is reddish, but not raw. Season with salt, pepper, butter, and lemon-juice; Worcestershire sauce as dessert. Exclude butter in bad cases of fatty degeneration. In these days of hard work and too fast living, the busy man can do well if he eats but one meat and one vegetable at a meal. If he has plenty of time to use in laying round, that is another matter; then let him live to eat, and vegetate while doing it.

2. Attention must be paid to that great gland, the skin, by giving the whole body a daily sponge bath of ammonia and water, and once a week a soap-and-water bath.

3. Passive exercise by rubbing and massage must be daily taken; a great amount of force can be placed in a sick person by the rubbing of him or her by a strong composed healthy man or woman. The healthy person may place one hand on the forehead and the other on the ankle or thigh of the sick one. Once in a while we find a case that will not be rubbed—i.e., the rubbing, instead of conferring force to the patient and soothing him, will irritate and annoy him. When the patient is improving, the riding of a barebacked horse at a walk will confer some force on him. Still later on active exercise must be taken, as walking. Riding in an easy carriage must also be used as a means of passive exercise.

4. The patient's underclothing must be changed night and morning, and care must be taken by the physician to see that the patient is clad warmly enough. Some people do not know what is the proper amount of clothes to wear.

5. The *morale* of the patient must be attended to. We are often asked, "How do you make your patients eat beef? I cannot make mine." The reply is simply, "We make them." Those that come to us are usually sick enough to care to do almost anything to get well. Indeed, they have been discouraged by the advice of friends and others that they could not be cured. Giving such a one the history of those that have been cured, even if as sick or sicker than the one about to commence treatment, and telling him that he is sick with a disease that has been commonly called incurable, that he is curable, and that if he will join hands with us and work together for the desired end, then, if the patient consents, good can be accomplished. It is never right to say that you are going to cure a patient. Instead, let him know of his desperate condition and what his chances are. A case of chronic disease should go on treatment for from six months to two years. He should pay by the month and in advance. This ensures better work on the part of the patient. His blood and urine, also fæces, must be studied to see how the case improves, to ascertain how much leeway can be allowed in his dietary. He must be encouraged when in the slough of despond, and must be held back when getting better and, feeling improved, wants to rush into work again. The mind must be closely studied. Causes of worry removed as far as possible. The patient must be instructed that it is for his benefit for him to give up care and live with the minimum expenditure of nerve force.

6. *Medicines as commonly called.*—There can be no question that in the treatment of these chronic cases the food is the first and best medicine. If not so considered, then take down your text-books and read the matter under the heading of "Therapy," and see what a hopeless enumeration of drugs there is. All that we can do is to get the nutrition on to a proper basis, and, turning the balance to the right side—i.e., towards health—wait and see what Dame Nature will do. The waiting is the hardest part of the trouble; so is waiting in all human affairs. But we must not forget that the trouble has been caused by long-continued acts of physiological sin, and it will take a long time of repentance and holy living to make the body whole again. But if the cases here given have been accurately recorded and truthfully published, then it must be a fact that as the human tissues are all the time changing, if we give Nature a chance she will lay down the healthy in place of the morbid. How far this principle extends only time will tell. The paper of the senior writer in the *Albany Medical Annals*, July and August, 1887, on Diet in Cancer, contains some very valuable facts as to the action of food influences in causing and curing tissues under mob law—rioting, as it were. Salisbury, in "The Relation of Alimentation of Diseases," notes many experiments in the causation of chronic diseases by feeding on different foods exclusively. If his observations are true, then they are of incalculable benefit to the profession; if not, their status should be known. It is to be hoped that these experiments on men and animals may be repeated on a large scale, that we may know the truth. But as to medicines, tonics of various kinds are admissible. Pepsin to be used as indicated. Medicines to keep all the glands in condition are in order.

As to milk, a great many physicians are using the exclusive milk diet, and with success in many cases. The condition of the urine as to biliousness when using milk must be ascertained. In our work milk often disagrees with our patients. If given, it should be taken warm from the cow, or should be sterilised. Milk is very capable of absorbing germs of many kinds, especially those that are producers of fermentative changes.

Lastly, the use of hot water, one hour before meals and on going to bed, is warmly recommended. It is a medicine *par excellence* for the stomach, liver, kidneys, and bowels. The water should be boiled (spring water or distilled water preferred), then cooled down to a comfortable temperature. The position taken by the senior writer in 1883 in his small pamphlet, "The Therapeutical Drinking of Hot Water," is still maintained by him and corroborated by the junior writer. Hot water has undoubtedly proved to be the "water of life" to many a sick one.

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A COLLECTION OF CASES OF HYDROPHOBIA REPORTED AS SUCCESSFULLY TREATED.

BY F. LUCAS BENHAM, M.D., M.R.C.P.

(*Concluded from p. 539.*)

CASES TREATED BY OTHER NARCOTICS.

Case 42.—Nicholls.[1] Male, aged twenty-five, bitten by a strange dog, probably rabid, early in January, 1878. Wound healed. Patient was in no alarm, and knew nothing of the symptoms of hydrophobia. Attack began on March 11th. After preliminary symptoms—malaise and trouble in drinking—for three to four days, he was suddenly seized with a fit, struggling violently; tetanic convulsions, and loss of consciousness. Convulsive attacks were incessant, and kept under by chloroform inhalations and subcutaneous injections of morphia, three grains and one-third, and Calabar bean, one-third of a grain. Attempts to drink and exposure to light would always produce spasms. By the 15th became conscious, could drink better, and spasms were much less, though specially induced by sight of white objects, and had quite disappeared by the 23rd. Was soon convalescent. This seems unquestionably a case of rabies. The period and mode of onset of the attack, and the mental symptoms, disprove its being tetanus.

Case 43.—Ruxton.[2] Boy, aged five, severely bitten on Sept. 10th by an infuriated bull bitch, which was destroyed soon after. — Oct. 19th: Feverish. — 20th: Symptoms alarming. Unconscious; disturbed by slightest noise; refused food and drink; convulsive attacks. Slept and sweated after wet pack. — 21st: Convulsions induced by slightest disturbance—violent fits of clonic muscular contraction; screaming, and spitting saliva; dreading all liquids. Treated by three five-minim doses of the tincture of cannabis indica, which procured continuous sleep and completely banished the attacks.—23rd: Well.

Case 44.—Broadbent.[3] Boy, aged between twelve and thirteen. Bitten on the hand by a strange dog. Admitted to St. Mary's Hospital, Feb. 25th, 1876, with violent convulsive attacks, brought on by any attempt to drink, sight or sound of water, contact of cold objects, light thrown on the eye, or pressure on the heart. In intervals, conscious, pale and anxious, temperature normal, pulse rapid, sighing respiration, and frequent muscular jerks. Rectal injections of chloral, brandy, and beef tea produced sleep and stopped the convulsions, so that he was able to drink and apparently well on Feb. 28th. Slight relapse next day, removed by chloral.

Case 45.—Sainter.[4] Male, aged forty. Four or five months ago his dog was altered and sullen, and bit his hand without provocation. The dog was destroyed the day after the patient's illness. After ailing for a week the attack began on Nov. 20th, 1871—a sudden convulsive attack, with screaming and struggling. Much difficulty in swallowing, and respiration was embarrassed by spasms of the diaphragm, pharynx, and larynx. Paroxysms about every ten minutes, but unaffected by sounds or currents of air, and less objection to fluids than usual. Twenty grains of chloral were given frequently, which produced sleep and abated the spasms. By the fifth day all signs of hydrophobia were gone. (The patient took 360 grains of chloral in all.) He was melancholic for some time, but eventually recovered. This case is not typical, but there were enough symptoms to make it probably a case of hydrophobia. The dog may have had a mild attack of rabies.

Case 46.—Finlay.[5] Boy, aged twelve, bitten by a terrier, which apparently lived. Attack began two months after, with severe pain at site of wound, which became the starting-point of a kind of aura, which was followed by insensibility, convulsions, and violent behaviour. Sight of any liquids produced attacks. Treated by chloral and bromide of potassium. Nearly well in a week. This case is regarded by the author as spurious and due to terror and anxiety; but it seems just as possibly genuine, though mild and abnormal.

Case 47.—D'Monte.[6] Male, aged eighteen, bitten by a dog believed to be rabid. Incubation two months. Attack: anxious and distressed, with paroxysms from time to time. Much affected by water, and would not touch it; also by noises, but not by currents of air. Had constant hawking and spitting of frothy mucus. Temperature normal. Occasional muscular twitchings, but no marked general spasms. Chloroform inhalations every half hour. Patient was well next day.

Case 48.—Jackson.[7] Female, aged thirty, bitten by a strange dog July, 1848. Mind not occupied by idea of hydrophobia. In October, cicatrices became inflamed and sore, and on Oct. 27th symptoms of hydrophobia set in. First shuddered at drinking, next dread at sight of water; then violent spasm of throat and alarming sense of suffocation on trying to drink. Spasms returned at intervals; easily induced even by air and light, and affected larynx and fauces, arresting respiration, and with biting and plunging of the head. Paroxysms were subdued by chloroform inhalations as required. One or two large doses of calomel given.—Nov. 1st: Sight of water produced but little distress, and she was able to swallow, and steadily recovered.

Case 49.—Ackerley.[8] Male, aged thirty, bitten by a rabid cat ten to eleven years before. After being ailing, irritable, and depressed for a few days, became on Jan. 17th unable to drink, rejecting liquids with spasm of muscles of deglutition. Wiped viscid saliva from his mouth. Rambled, was wild in manner, and was haunted by image of a cat. Continued sullen, with horror of fluids; spasmodic contractions of limbs and throat; struggled violently, sometimes opisthotonos. Treated by extract of cannabis indica and chloroform inhalations. Recovered by Jan. 25th. This case is exceptional, but not impossible, on account of the length of the incubation period.

Case 50.[9]—Male, aged twenty-three, previously healthy, bitten on Oct. 15th, 1887, while separating two dogs fighting. One dog bit him again on Oct. 28th, and was killed, supposed to be rabid, on the 30th; the other was shot, probably rabid, on Oct. 31st (rolling over in convulsions, glaring fiercely, and biting everything). On Oct. 15th the patient appeared depressed, and became more dull, forgetful, and nervous. On the 29th he complained of shooting pain in epigastrium, appeared dull, distressed, and emotional, but could answer questions intelligently. He was affected, especially at each onset of pain, with tetanic spasms of face, neck, and shoulders, and became violent, trying to bite any person or thing in his way, being especially excited throughout the illness by white objects; he snapped his teeth and made a stertorous barking noise. He was unconscious of what he was doing until Nov. 2nd. Early on Oct. 30th the spasms were almost continuous for one hour. Took liquids without any great difficulty, glaring at the cup, and swallowing the contents in a spasmodic, hasty manner. After the morning the spasms abated, and he began to sweat; slept at night.—Oct. 31st: Better; spasms slighter, consisting only of brief raising of shoulders and upper lip, though there was an outbreak of violence again in the evening.—Nov. 1st: Dull, but takes liquid well.—2nd: Convalescent. He was treated by pilocarpine in two doses of one-third of a grain, which seemed of much benefit, also by bromide of potassium and sulphate of magnesia. This

[1] THE LANCET, June 15th, 1878.
[2] Brit. Med. Journ., Nov. 19th, 1881.
[3] Transactions of the Clinical Society, Feb. 23rd, 1883.
[4] THE LANCET, April 20th, 1872
[5] Case of Mania with Hydrophobic Symptoms, THE LANCET, vol. i. 1870.
[6] Brit. Med. Jour., Feb. 13th, 1886.
[7] Amer. Jour. Med. Sciences, Philad., 1849.
[8] Case of Hydrophobic Mania, THE LANCET, vol. ii. 1848.
[9] For the notes of this case I am indebted to Dr. Cook of Torquay, under whose care it was.

seems a genuine though mild case. The bite was probably inflicted by an animal in the early and latent stage of rabies. The symptoms were not due to nervous excitement, from alcohol or hysteria, or to tetanus; and the attack subsided before any violent and dangerous spasms of deglutition and respiration had developed.

CASES REFERRED TO, BUT THE REPORTS OF WHICH ARE INACCESSIBLE.

Arnell.[10] Case cured by cold affusion.

Bellini.[11] Case cured by intravenous injections of chloral, and subcutaneous injections of Calabar bean.

DOUBTFUL CASES.

Du Heaume.[12] Evidence of inoculation very doubtful, and symptoms anomalous, though the patient was alarmingly ill with attacks of respiratory spasm, convulsions, delirium, &c. Treated chiefly by copious bleeding. The case was regarded by the author as probably hydrophobia.

Arnold.[13] Bitten by a dog probably rabid. Symptoms only partially characteristic, and much mixed up with hysteria. Illness protracted. Treated chiefly with musk. The author was convinced of the genuineness of the case, and records it with excessive detail.

Haines.[14] Bitten by a dog doubtfully rabid. Along with inflammation of the wound symptoms came on which might have been those of incipient hydrophobia. Was cured by rapid salivation by large doses of calomel.

The above cases seem all worthy of collection and record. Most seem certainly genuine, and many are severe cases, though others are difficult to prove, but are at least probable, and they may be of use in suggesting successful treatment. One point is striking about almost all the successful cases—viz., that decisive treatment was commenced at an early stage of the disease, before it had progressed far enough to be hopeless. This should enforce the importance, not only of the kind and vigour of the treatment, but of prompt diagnosis, and of not losing any time in taking active measures. Of the various modes of treatment it seems to me that of any single kind very copious bleeding is the surest. Mercury alone or combined with it is also tolerably sure. Only a few cases have been reported of failure after *very large* bleedings. Cold affusion or vapour baths may also be successful, or sweating may be induced by pilocarpine. Curare also, if pushed decisively, promises fairly well. Chloral and chloroform may be useful to lessen the violence of the paroxysms, and may sometimes subdue them altogether; but morphia, especially in small does, is not to be relied upon, even to procure relief, for it often only aggravates the disease. The above collection comprises all I have been able as yet to find anywhere alluded to, but they are so scattered about in various periodicals &c. that the abundant literature of the subject may perhaps yield more. Others may not have been recorded at all. They have been brought forward to show that recovery is not so impossible as is commonly taught, and that others may be encouraged to try and procure equally good results. It is to be hoped that as long as hydrophobia is permitted to exist, by neglect of the muzzle, patients afflicted with it may not be allowed to die without some effort being made to save them.

CASE OF

EXTENSIVE BURN OF LEG TREATED BY GRAFTING WITH SKIN OF DOG.

BY ALEXANDER MILES, M.B.,
LATE RESIDENT SURGEON, ROYAL INFIRMARY, EDINBURGH.

THE following case, which was shown to the members of the Edinburgh Medico-Chirurgical Society on Dec. 4th, 1889, may prove of interest from two points of view. On the one hand, because of the extreme frequency with which such cases are met in practice; and on the other, in view of the somewhat unusual means adopted for the relief of the patient. The facts of the case are briefly as follows.

W. A——, aged ten, a schoolboy, was admitted to the Royal Infirmary, Edinburgh, under the care of Mr. A. G. Miller, on May 24th, 1889, suffering from an extensive ulcer on his left leg, the result of a burn. On April 22nd (a month before his admission), while playing on the top of a boiler used in the preparation of cow's food, he slipped, and his left leg was plunged into the boiling mixture as far as the knee. He at once withdrew it, and ran home, which was only a short distance. His leg was found to have been scalded all round from the middle of the patella to the ankle, the foot having been protected by the boot which he wore. He was put to bed, and treated by his friends with various household remedies. On May 23rd, after a month of this treatment, he was seen for the first time by a doctor, who at once sent him to the hospital. On admission it was found that the whole of the skin of the leg, from the level of the middle of the patella to the ankle, with the exception of a small island on the front of the tibia, measuring two inches by half an inch, had been completely destroyed. The greater part of the resulting ulcer was covered with healthy granulations, but there were a few sloughs still unseparated. These were soon got rid of by means of boracic-lint poultices, and at the end of a fortnight the whole surface was covered with healthy granulations, but there was not the slightest attempt at cicatrisation. As a sufficient quantity of human skin to cover in the large area could not be obtained, it was suggested that the skin of some animal should be used. Accordingly, with the co-operation of the friends of the child, we obtained a young greyhound. The animal was seven days old, and in colour was black and white. On June 6th, about six weeks after the boy met with his accident, the grafting operations were commenced.

The puppy having been killed with chloroform, I closely shaved the whole of the anterior abdominal wall and flanks, and then dissected up the flap of skin thus mapped out. The whole thickness of the true skin was taken, leaving the subcutaneous fat. Meanwhile the leg had been thoroughly cleaned by the nurse, and all bleeding from the granulations arrested. The skin taken from the puppy was cut into strips measuring about six inches long by half an inch broad, and firmly pressed into the ulcer in the long axis of the limb. Smaller grafts about an inch square were used to fill in spaces left between the larger ones. A considerable area over the inner side of the knee still remained bare, and to cover it the skin from the pup's tail was dissected up, unshaved. The dressing consisted of small pieces of protective applied next the grafts, with the edges overlapping to facilitate removal, as well as the escape of discharge, and outside this a few layers of unprepared gauze moistened with weak boracic lotion; the whole dressing being kept moist by a layer of gutta-percha tissue. Over all a good layer of corrosive wool and a firm bandage were applied.

Subsequent notes.—June 9th: Ulcer dressed to-day—three days after operation. One small graft had distinctly sloughed, and came away on the dressing, but the others all adherent. Cicatrisation had already commenced round the margin of the ulcer, and also round the island of skin in the centre.—11th (two days later): A stream of lotion could be run on the grafts without disturbing them. The island had, through the medium of some grafts, become joined to the lower margin of the ulcer.—26th: During the next fortnight healing went on rapidly. Some portions of the long strips sloughed, but the smaller grafts all did well. It was interesting to observe that the graft taken from the tail, which was not shaved, behaved exactly as sponge does, by promoting granulations. The hairs round the margins seemed to stimulate the granulations, which grew up on to the surface of the graft, and then spreading, completely swamped it. A few small grafts of human skin taken from a young boy were scattered here and there to fill up gaps still left. These all did well.—28th: One or two spots still remaining were covered with pieces of frog's skin, but without exception these failed to take. The frog was an old one.—July 18th (six weeks after commencement of skin grafting operations): The ulcer was entirely healed. The patient was, however, kept in bed for a week or two longer, and then gradually began to use the limb.—March 10th, 1890: It is now over seven months since the patient was last under treatment, and the leg is now as useful as ever it was. There is absolutely no contraction in the cicatrix, except where the tail skin was planted, and there it is very slight. The colour of the skin is uniform and very similar to that of the normal skin. There is no evidence of any development of hair or of cutaneous secretions. The ordinary sensation is as good as in the other leg, and the temperature of both is the same.

[10] New York Med. and Phys. Jour., 1824.
[11] Giorn. d'Accad. di Med. di Torino, 1877.
[12] Lond. Med. Gaz., Dec. 1837.
[13] Case of Hydrophobia successfully treated, 1793.
[14] THE LANCET, vol. i. 1847.

Remarks.—There are three main factors upon which the success of such a case as this depends—(1) the general condition of the patient, (2) the condition of the ulcer, and (3) the means adopted to hasten the healing of the ulcer. The only favourable point in the general condition of the patient whose case I have just quoted was his age. His general health was very much below par, and it is to this fact I believe that we must ascribe the absence of any attempt at cicatrisation before the grafting was begun. As regards the condition of the ulcer, nothing could have been more satisfactory. It was a typical healthy, granulating surface. But I believe that the success of this case was mainly due to the means adopted to cover in the sore. I am not prepared to say that the skin of the dog is better than that of other animals; but this animal can readily be obtained, and yields a sufficient amount of skin for most cases. The important point, however, is the age of the animal selected. In the first few days of extra-uterine life the creature grows very rapidly, and by grafting a large area of young tissue, with a potentially great developmental power, we quickly cover in the ulcerated area, and so prevent the contraction which invariably results after extensive burns when these are allowed to heal without artificial aid.

Edinburgh.

CASE OF

TYPHOID OCCURRING IN A YOUNG MAN THE SUBJECT OF MARKED PHTHISIS.

BY JAS. SHAW, M.B.GLAS.

THE following case is of interest on account of the rarity with which typhoid supervenes on well-developed phthisis, and also because of the striking way in which the tubercular advance was arrested by the onset of the typhoid. This and other recorded cases of the coexistence of these two fevers disprove Hunter's axiom that two specific constitutional diseases cannot exist in the same person. But, as regards this combination at all events, may not a modification of the above axiom approximate to the truth—viz., that two specific constitutional diseases cannot run their course contemporaneously in the same person? The present case certainly tends to support such a view. For one month at least the enteric poison seemed to suspend, if not to antagonise, the action of the phthisis. As regards diagnosis, the presence of phthisis was from the first easily determined, and the accession of the typhoid had to be distinguished chiefly from acute phthisis and ague. The improved, or rather stationary, pulmonary conditions excluded the former, and the course of the pyrexia the latter. I may add that the prognosis in such cases must be very unfavourable.

T. N. B——, aged twenty-one, a blacksmith's apprentice in Her Majesty's Dockyard, consulted me on Nov. 13th, 1888, complaining of cough, loss of flesh, and debility. The previous August, after rowing in a race at the regatta, he had caught cold, and since then had never felt well, although able to continue at work. His appetite was not much impaired, but he was positive he had grown a good deal thinner. His cough was most violent in the morning, and the phlegm was greyish in colour, tenacious, and not abundant. There had been no diarrhœa or hæmoptysis. His breath became very short, even on slight exertion. During the last few weeks he had perspired considerably at night. Occasionally he had felt pains about his chest, but they did not last long and were not severe. The patient was pale, thin, and anxious. His family was well known to me. Eighteen months ago his mother died of phthisis, and he had lost two brothers and a sister from the same disease. His father, three brothers, and a sister are alive and well. Physical examination showed marked flattening and deficiency of movement over the right apex. There was distinct dulness. Both front and back of the right apex coarse moist râles were detected, and the expiration was hollow and prolonged. Over the left apex the breath sounds were exaggerated, and in the infra-clavicular space some fine crepitation could be heard. The temperature was 101°; pulse 96; respiration 24. Some acid cough mixture was prescribed for him and he was ordered to leave off work and stay at home. Two days afterwards I saw him at his home. He was looking very ill and trembled a good deal. His cough was better and the perspirations had stopped. During the night he had suffered from diarrhœa. He had passed several motions, which were yellow in colour, fluid, and very offensive. None of them had been kept. Temperature 103·6°; pulse 108 (weak). He was ordered to bed and put on milk diet, lime water being given for the diarrhœa. Every motion to be disinfected. At 8 P.M. on the same day the temperature was 105·2° and the pulse 120. He expressed himself as feeling comfortable. There was some tenderness in the right iliac fossa.—Nov. 16th (the following day): He had passed a good night with but little cough, and had taken his nourishment well. There had been four stools since the previous evening. Temperature 104·3°, pulse 112. That evening the temperature was 105·8°; the pulse 120. He was put upon mist. fusca. From this time the typhoid ran a favourable course. The temperature first touched normal on Dec. 10th. On one occasion only was it necessary to prescribe medicine, and that was ten grains of chloral for insomnia. His cough was very slight, scarcely troubled him, and there were no perspirations. He said he felt better than he had done for some time. Matters at the right apex appeared to be *in statu quo*, and over the left only the exaggerated breath sounds could be heard. He was able to get out on the 25th. He was taking tonics now and appeared to be making flesh. His pulse continued persistently fast—108 to 120. On Jan. 10th, 1889, he left for London, on a visit to a brother. He was ordered to continue his tonic, take wine and cod-liver oil with malt, and enjoined to observe every precaution against cold. I saw no more of him till Feb. 25th, when I was asked to visit him. He had been home for about three weeks, and had been dosing himself with a patent balsam. He was pillowed up in bed, exhausted and breathless, and complaining of pain in the right side. He was suffering from extensive pleurisy of the right side. His cough was almost incessant, and the expectoration was profuse and yellowish. There were colliquative perspirations and diarrhœa, anorexia, and sleeplessness. He was too feeble and in too much distress to allow a careful examination of his chest. Temperature 103·4°; pulse 130; respiration 35. He continued to grow worse, and died on March 4th.

Sheerness.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF CHRONIC NASAL AND PHARYNGEAL CATARRH APPARENTLY CAUSED BY USING A HAIR-WASH CONTAINING ARSENIC.

BY DONALD W. C. HOOD, M.D. CANTAB.,
SENIOR PHYSICIAN TO THE WEST LONDON HOSPITAL.

ON July 22nd, 1889, A. B——, a gentleman aged forty-two, consulted me for a "cold in the head," which he told me had been more or less constant since the previous March. There were no other symptoms of illness; the chest was healthy, and the urine to ordinary tests perfectly normal, the symptoms being solely those of a heavy "cold in the head." The catarrh was worse in the morning, and was then accompanied with a little cough; the throat was not sore, but complained of as being uncomfortable. The mucous membrane looked injected, and perhaps a little swollen. There was nothing in the nares to account for the symptoms. The patient had been a good deal harassed by the management of a large business, and had had no proper holiday for some time. I thought the cold or succession of colds might result from this, so suggested a thorough change, to commence with a few weeks at the seaside. At the end of August I heard again from A. B——. He wrote to me, stating that since consulting me in July he had been to the seaside and Scotland, having been away from town nearly two months. He felt perfectly well, but the cold in the head was as bad, if not worse, than at the time of seeing me in July. Immediately on reading this letter, my suspicions as to arsenic being the exciting cause were aroused. It was evident that if arsenic was producing this constant catarrh, it was not to be looked for in the London house, but was to be sought for in something of frequent if not daily use. On making inquiry, I ascertained

that early in the preceding March the patient, suffering from premature baldness, had consulted a "hair doctor," and had been given a lotion or hair-wash, which had been used daily up to this date (August). The lotion was applied to the skin of the scalp, and allowed to dry on. The catarrhal symptoms commenced about a fortnight after first using the wash, and had remained without any intermission up to the end of August. This lotion was examined, and found to be heavily charged with arsenic. Within a few days of leaving off this pernicious application the symptoms (catarrh) began to abate, gradually ceased, and have not again returned. It is worthy of notice that in this case, if the symptoms were produced by arsenic, and of this I think there can be little doubt, the poison was absorbed from an unbroken skin, and caused no irritation of skin, stomach, or bowel.

Green-street, W.

A CASE OF FRACTURED SPINE; RECOVERY.

BY SANDERSON MELLOR, L.R.C.P. & S ED., ETC.

THE following case may not be altogether without interest, occurring as it did in a country practice. For this reason I venture to send a brief account of it.

T. S——, aged forty-two, was gathering cherries from a ladder on July 11th, 1889, and, overbalancing himself, fell on to the back of his neck, a distance of about sixteen feet. He was removed in an insensible condition to a neighbouring infirmary. In that institution he was seen by three surgeons, who all diagnosed beyond the shadow of a doubt a fracture of one of the cervical vertebræ. There were displacement, great pain, and crepitus. His wife was informed that recovery was quite impossible, and that it was not expected he could live more than two or three days at the longest. The wife thereupon determined to remove him home at once, a distance of seven miles, as she "could not bear the thought of anything happening to him at the infirmary." Although cautioned that it would be a most dangerous procedure to attempt, she nevertheless persisted. On his arrival at his home I was sent for, and I saw him about an hour after he had been placed in bed. His condition was briefly as follows:—He was quite sensible, complaining of excruciating pain at the back of his neck, and he could not move in bed, neither arm nor leg. He could not feel the prick of a pin, except over the chest and upper part of the abdomen. The bladder failed to expel its contents, and the sphincter ani had lost its control over those of the lower bowel. As a water bed was out of the question, he was placed on a hard mattress, with a thick layer of cotton wool under the nates and heels. The urine was drawn off twice a day with the aid of a silver catheter dipped in carbolic water (1 in 20), and oiled in carbolic oil (1 in 10). On the seventh day, with every care he was turned on his side, when a large bedsore presented itself; after this he was kept on his right side, then on his left, for two days at a time, during which period bedsores formed on each trochanter. On the fourteenth day he was propped up in bed, and from this day he made an uninterrupted recovery. After removal of the slough of the sacral bedsore by the aid of poultices, the wound was dressed with oxide of zinc and starch, and the sound skin immediately round was strengthened alternately with rectified spirit and boracic lotion. On Aug. 24th he was removed to the union, as his wife, who had been his faithful nurse, wished to go hop-picking, in order to earn a little towards her expenses.

The chief interest in this case seems to be that after five weeks' systematic catheterisation, with the precautions stated above, there was no trace of cystitis, with its numerous sequelæ; that at the end of this period the bladder resumed its normal function; and that when the patient walked into my surgery on Nov. 11th he contemplated obtaining some light occupation the following week.

West Malling.

AN ANOMALOUS CASE OF PREGNANCY OF CLINICAL INTEREST.

BY JAMES OLIVER, M.D., F.R.S. EDIN.

EDITH W——, aged twenty-two, has been married three months. Date of marriage, Nov. 10th, 1888; date when first seen, Feb. 20th, 1889. Patient was last unwell on Jan. 25th, the discharge on this occasion being very scanty; prior to that she had been unwell on Dec. 25th, when she lost as usual. Since about Dec. 27th the patient has been constantly sick and for five weeks she has remarked "swelling" of the left leg. The physical signs were: the left leg was œdematous and pitted readily on pressure; the thickest part of the left calf measured 12¾ in., whilst the thickest part of the right measured 10½ in. The specific gravity of the urine was 1004; it contained, however, no trace of albumen. Vaginally, the uterus was lying on the vaginal roof, expanded laterally; the left half appeared to be larger than the right, and the cervix, which was long and not specially soft, was somewhat deviated towards the left side of the pelvis. Bimanually, the uterus was felt reaching to 3 in. above the pubes. The left and more prominent half of the uterus was tender to the touch. Colostrum was detected in both breasts on March 9th. The uterus on March 23rd was, comparatively speaking, of uniform outline, and located centrally: it reached to 1 in. from the umbilicus. Under treatment the sickness gradually abated and the œdema of the left leg rapidly subsided. Movements were experienced by the patient for the first time on April 1st, and on Sept. 3rd she was delivered by Dr. Gimson, of Fitzroy-square, W., of an apparently full-time female child. Now, allowing this patient 275 days for gestation, we will find that after conceiving the menstrual discharge recurred twice. On the first occasion it will be remarked the catamenial discharge was of the usual amount, whilst on the second occasion it was greatly lessened. The number of days from Dec. 2nd (the probable date of conception) to Sept. 3rd of the following year (the date of delivery) is 275. On Dec. 25th the first menstruation occurred, which was normal; on Jan. 25th the second, which was scanty; on March 9th colostrum in breasts; on April 1st fœtal movements were felt. Now, a glance at the above will show that colostrum was obtained from the breasts on the ninety-seventh day after the probable date of conception, and movements felt for the first time on the 119th day, or at the close of the seventeenth week. All the facts taken into consideration prove that the patient must have menstruated twice after conceiving.

Gordon-square, W.C.

THE FORCE REQUIRED IN LABOUR.

BY F. R. HUMPHREYS, L.R.C.P. LOND.

SO much doubt hangs over the amount of force required to bring a child into the world, that any little observations on the point may be of value in elucidating the question. Occasionally a patient is met with who can exert some control over herself during the second stage of labour. The following observations were made in such a case.

In the early part of the second stage, during a pain, the patient was suddenly desired to take a deep breath. The head at once retreated—i.e., was distinctly drawn up by the force exerted in the process of inspiration, while the hand, which was kept grasping the uterus, did not show any diminution in the contraction of the uterus. This would indicate that the force of expulsion of the uterus was at this stage decidedly inferior to that of the inspiratory power of the chest. When the head reached the vulva, the same directions &c. to the patient had the result of the head drawing up very slightly with the vaginal tissues and instantly coming down to the position it previously occupied, showing that the elastic traction of the tissues of the vagina were less than the force of inspiration, while the latter was in its turn less than the expulsive power of the uterus. Now, the inspiratory power of the chest is put by Landois and Stirling, in their "Text-book of Human Physiology," at 74 mm. of mercury as the maximum. This is equal to 1 51b. per square inch. The area of the vertex of the fœtal head on which the forces of expulsion act being taken at about sixteen square inches, the force exerted by the uterus would be 24 lb., varying between 16 lb. and 50 lb. in all probability; and if the maximum power of expiration be taken at 100 mm., or 2 lb. to the square inch, or 32 lb. on the area given, the sum of the two forces will be early in the second stage 48 lb. or less, the expulsive force reaching 82 lb. as a maximum. This accords, I notice, very closely with Dr. Matthew Duncan's maximum of 80 lb. I put the estimate of the minimum and maximum uterine pressure on this occasion at 16 lb. and 50 lb., by comparing respectively the difference the inspiration made on the two occasions in its impression on the finger and in its action on the head. That the pressure of 56 lb. is both reached and passed is demonstrated by the above-mentioned clinical facts.

Queen's-crescent, Haverstock hill, N.W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

THE LONDON HOSPITAL.

AN UNUSUAL CASE OF EXTRA-VAGINAL HÆMATOCELE; REMARKS.

(Under the care of Mr. M'CARTHY.)

OUR readers will recollect that in the male, when the term "hæmatocele" is used, an effusion of blood into the tunica vaginalis testis, or into a cyst connected with the testis or cord, is signified. The condition described below, which may have arisen from injury to a vessel during a tapping, is a rare one, and presents several features of interest alluded to in the remarks. It is possible that the age of the patient, with the loose scrotal tissue and diminished contractile power of the dartos, may have predisposed to the formation of the cyst.

On Jan. 15th, 1890, a man aged seventy-four was admitted into the London Hospital for a large swelling in the left half of the scrotum. The swelling was globular below, but above had a tubular prolongation which filled the inguinal canal and terminated at the internal ring. The skin at the bottom of the scrotum was discoloured, as if there had been a slight subcutaneous hæmorrhage. The swelling fluctuated distinctly, but was not translucent. The patient stated that he had been repeatedly tapped, and that clear yellow fluid had been drawn off. There seemed, therefore, no reason to doubt that it was a hydrocele of the tunica vaginalis, with thick walls or opaque contents, possibly from the presence of cholesterine. On tapping it, about ten ounces of dark bloody fluid were drawn off. There was still some enlargement of the scrotum remaining, but this was attributed to blood-clot and, possibly, thickened sac. The patient could not remember any injury. The last tapping had been in August, 1889, and the swelling had formed gradually. He had no cough, nor was he subject to any violent exertion. During the ensuing ten days the sac refilled, and was again tapped. A smaller amount of fluid similar to the first was drawn off. Strapping was applied, and, as there was no return of the swelling, the patient was discharged, with directions to come back if he had any further trouble. He returned at the end of a month with the sac again full. As his general condition was excellent, Mr. M'Carthy, when the patient had been anæsthetised, incised the sac freely. Dark coloured fluid escaped, but the wall of the sac was quite smooth and free from clot. When the incision had been enlarged some œdematous decolourised fibrine was seen. On removing this, the testicle became visible, with its tunica vaginalis intact, and distended with what proved to be about two ounces of ordinary hydrocele fluid. The testicle, suspended by the cord, lay quite free in the adventitious sac, which in colour, thickness, and consistence resembled parchment. The parietal layer of the tunica vaginalis was excised, and the adventitious sac peeled off with considerable difficulty from the scrotal tissues. There was no capillary bleeding from the thus exposed surface. Two small veins required ligature. The wound was closed and dressed antiseptically. It healed rapidly, and the patient was discharged within a fortnight after the operation.

Remarks by Mr. M'CARTHY.—This case was unusual. First, in the gradual formation and undiscoverable cause of the primary hæmorrhage. Secondly, in the complete isolation of the testis and its tunica vaginalis from the surrounding tissues. Thirdly, in recorded cases of chronic hæmatoma of the scrotum the sac is said to be formed of condensed scrotal tissue. In this case the scrotal tissues were thicker than normal, but the proper wall of the sac was formed of a uniform layer of fibrine, which though firmly adherent to received little or no blood-supply from the subjacent structures. Fourthly, this sac apparently secreted a serous fluid similar to hydrocele fluid. For although the fluid obtained by tapping and incising the sac was very dark coloured, yet this must have been due to colouring matter dissolved out of the original clot; for the appearance and quantity of fibrine found in the sac were incompatible with the refilling of the sac having been due to repeated hæmorrhages. Lastly, excepting the very slight discolouration of the skin at the lowest part of the scrotum, all the ordinary indications of a scrotal hæmatoma were absent.

LIVERPOOL NORTHERN HOSPITAL.

CASE IN WHICH LITHOTOMY WAS PERFORMED ON THE SAME MAN TWICE WITHIN TWELVE MONTHS; REMARKS.

(Under the care of Mr. CHAUNCY PUZEY.)

WHEN a surgeon nowadays removes a stone by lithotomy he usually does so either by the lateral or by the suprapubic method, and it is not often that any of the other cutting operations are practised. The operator in this case found the medio-bilateral operation, which was introduced and employed by Civiale in the year 1827,[1] the one best adapted for his patient, and gives his reasons for its selection. Another point worthy of notice beyond those mentioned by Mr. Puzey in his remarks is the antiseptic action of saccharin on the urine, as indicated in the account of the case. Dr. Little in 1888 brought under the notice of the Dublin Medical Society[2] the power of saccharin in preventing ammoniacal decomposition in the urine, and read cases illustrating the excellent results produced by its internal administration. In the same year Dr. Mercier[3] in France, and Dr. Haike[4] in Germany, also wrote about this property of saccharin.

Francis N——, a railway clerk, aged fifty-four, was admitted into hospital on Oct. 22nd, 1888, suffering severely from cystitis. The history of his bladder trouble dated from six months before, and the symptoms pointed to prostatic obstruction rather than to calculus. The man was stout and corpulent, weighing 16½ st.; he had a large scrotal hernia, only partly reducible; and had suffered amputation of the left thigh high up for accident many years ago. For a fortnight before admission he had been passing urine every quarter of an hour whilst awake, and when asleep it constantly dribbled from him. Hence he was in a miserable condition, his urethra and penis being very sore from constant soaking in thick ammoniacal urine. A sound was passed, and a large, hard stone was felt, apparently fixed in the situation of the prostate gland. It was therefore decided to remove it by median incision.

On Nov. 1st lithotomy was performed. Under chloroform, it was found that the stone was within the bladder; it no longer felt fixed, but lay steadily at the base of the bladder close to the neck. For reasons to be given later on, Mr. Puzey decided upon the median bilateral operation. No difficulty was experienced until after the forceps had been passed into the bladder; then at first the stone was grasped in its longest diameter, and when, after much trouble, it had been seized in a more favourable position, it could not be extracted until the neck of the bladder had been incised upwards in the direction of the pubes. The calculus weighed 1206 grains, and was composed of uric acid and urates; its shape was flattened oval; its longest diameter two inches and a half; its width one inch and three-quarters; its thickness three-quarters of an inch. It was not fractured or chipped. The bladder was well washed out with warm boracic acid solution, and thoroughly explored, and no trace of any other stone was found. A double lithotomy tube was secured in the bladder for drainage and irrigation purposes. One of these tubes was removed next day, but it was found necessary to retain the other for several weeks on account of the obstinate cystitis, which continued for long after the operation, and was aggravated whenever the tube was removed. Moreover, in the course of a few days numerous small concretions, varying in size from that of the smallest shot to that of a large pea, began to be passed; some through the urethra, some through the wound; so that sometimes the urethra, sometimes the wound, became obstructed by them. Every kind of treatment, constitutional and local, was tried with only partial success. On March 11th,

[1] Parallèle des Divers Moyens, etc., 1836.
[2] Dublin Journal of the Medical Sciences, p. 493, June.
[3] Journal de Méd., April. [4] Deutsche Med. Wochens., November.

1889, the sinus remaining from the wound, which was coated with phosphatic deposit, was thoroughly opened up, the lower part pared, the upper part scraped with a sharp spoon until the urethra was reached, and found quite clean. After this the treatment consisted in washing out the bladder twice a day with a tolerably strong solution of nitric acid, and gradually the sinus closed; but still a piece of "grit" occasionally stuck in the prostatic urethra and caused trouble, until it was washed away by the stream of urine. The man left the hospital on April 11th and returned to his work. The sinus was soundly healed, but he came to the hospital two or three evenings a week to have the bladder washed out, as small pieces of "grit" were still passed occasionally. Throughout the summer he attended once or twice a week for this purpose.

Some time in August the house-surgeons on two or three occasions felt some obstruction (apparently calculous), which occasioned some difficulty in passing the catheter; then that trouble ceased. But towards the end of September he had such a severe attack of cystitis that he was obliged to give up work, and on Oct. 11th, 1889, he was again admitted to hospital, suffering from all the symptoms which had been noticed a year before, only in a minor degree. With the sound, a fair-sized calculus was found in the same position as on the former occasion. In consequence of the patient having a severe attack of urticaria, operation was postponed to Oct. 24th (a year all but a week from the first lithotomy). Under chloroform, the stone was felt to be quite loose in the bladder. The incision was made along the line of the former operation; the bladder was readily entered, and with the finger a soft calculus (about the size of a walnut) was felt. As soon as it was grasped with the forceps it broke up, and only about half of the mass (with its nucleus) was removed; the rest was removed by forceps, scoop, and prolonged irrigation of the bladder with warm boracic acid solution. The only trouble afterwards was the chronic cystitis with continued tendency to phosphatic deposits about the wound. It appeared likely that this condition would again prove a serious drawback; when it was decided to try the internal administration of saccharin in addition to the other methods of treatment, and in two or three days the character of the urine completely changed; it became sweet, clear, light amber-coloured, free from deposits, and so it has continued ever since. The sinus closed in about a month, and the man left the hospital on Dec. 18th.

Remarks by Mr. C. PUZEY.—There are two distinct matters in the history of this case which, I think, call for special comment. One is the reason why the median bilateral operation was selected for the first operation; the other is the cause of, or the method of, formation of the second calculus. With regard to the first point, I may say that it was not until the man was fully anæsthetised that I knew that I had to deal with a large intra-vesical calculus. On previous examinations (without chloroform) by myself and colleagues, it had appeared that the stone was fixed in the situation of the prostate gland (certainly the sound did not fully enter the bladder), and it appeared that we had to deal with a large prostatic calculus. This is no doubt to be explained thus: the hypertrophied and contracted bladder so spasmodically grasped the stone, that it was impossible for the sound to do more than insinuate itself a little way between the stone and the anterior wall of the bladder. Under chloroform, all muscular spasm was overcome, and the result of the examination was quite different. The same thing was noticed on the occasion of the second operation, and it affords a hint as to the desirability of "sounding" under anæsthetics in all cases involving doubtful diagnosis. As it was I had to make a rapid decision. The extreme stoutness of the man, and his large hernia, would have made the supra-pubic operation most difficult, especially as his long-contracted bladder would probably be incapable of forcible distension. The contracted state of the bladder, and the extremely severe cystitis which existed, together with the size of the calculus contraindicated litholapaxy. With regard to lateral lithotomy, I admit that I was influenced against that by the fatal difficulties which I had seen encountered by a first-rate operator in a remarkably similar case. The depth of the wound rendered it impossible for the surgeon to reach the bladder with his finger; the operation was extremely prolonged, accompanied with troublesome hæmorrhage, and the patient never rallied. There is no doubt that the median incision affords the shortest route to the bladder. Then with regard to the formation of the second calculus: its nucleus was of a peculiar shape, resembling the shaft of a small metacarpal bone; its length was one inch and three-eighths, its greatest width three-eighths of an inch; its composition phosphatic. It appeared to have been moulded in the prostatic urethra, and had been broken into two pieces. The history of the formation of the second stone was doubtless this: The slowly increasing calculus which had formed in the prostatic urethra was dislodged, broken across, and pushed into the bladder by the catheter, and then it rapidly increased in growth by the heaping up of ammoniacal phosphates and the other products of cystitis. As to the source of the enormous quantity of small concretions which were passed for weeks, or rather months, after the first operation, I can only imagine that they had lined the rugæ of the long-contracted bladder, and that, as we day by day washed out and distended that viscus, these deposits were dislodged. They were certainly independent formations, and not fragments of a fractured calculus.

DERBYSHIRE GENERAL INFIRMARY.

GOITRE IN A BOY CAUSING SOFTENING OF TRACHEAL CARTILAGES; TRACHEOTOMY; DEATH.

(Under the care of Mr. CURGENVEN.)

THE operation of tracheotomy in cases of acute goitre is sometimes attended by difficulties which are almost insuperable, and to overcome them the greatest skill and care on the part of the operator are demanded. The urgent attack may come on at night unexpectedly. There may be no time to give chloroform, the surgeon may be single-handed, the dyspnœa urgent and distressing, the patient possibly half dead from asphyxia, but retaining sufficient consciousness to move and resist the incision in his neck. The hæmorrhage from the distended veins is free, and increases as the incision is deepened; the trachea may be difficult to find because displaced, altered in shape and consistency, and so far from the surface that the ordinary tubes will not reach it, or remain *in situ*, should they be of sufficient length. The dyspnœa in these cases appears to be caused by compression of the trachea, and the note of its condition as observed post mortem in this case, "softened and partially absorbed," is important. For the following notes we are indebted to Mr. Chas. H. Tayler, house surgeon.

A. H——, a lad of fourteen, was admitted into this infirmary on Dec. 2nd, 1889, suffering from extreme dyspnœa. Both lobes of the thyroid were seen to be slightly enlarged, and the isthmus very much increased in size. Inspiration was more interfered with than expiration. He stated that the swelling began about five months previously, and had only interfered with his breathing the last few days. The boy was put to bed and iced cloths applied to the throat, and his breathing became easier. Early on the following morning dyspnœa came on again, and tracheotomy was decided upon. Assisted by Dr. Kirkpatrick, the assistant house surgeon, Mr. Tayler carefully cut down in the middle line in the small space at his disposal between the isthmus and the upper edge of the sternum to a depth of about one inch, but could neither see nor feel anything corresponding to the trachea. The hæmorrhage was excessive, and the patient's condition was becoming desperate, so Mr. Tayler deepened his incision, still keeping carefully in the middle line. So low down the throat was it necessary to carry the dissection owing to the encroachment of the isthmus, that in the lower angle of the wound, the aorta could be felt pulsating. Again a finger was inserted, but neither the trachea nor even movement of any structure could be felt during his attempts at inspiration, which were becoming gradually fewer and feebler. Examination of the left side disclosed nothing, but at last low down to the right side what seemed to be a knuckle of cartilage was discovered. Passing the scalpel along the finger, this was notched and in and out rushed air. Dilating forceps were then introduced and an attempt made to introduce a bivalve trachea tube; but no ordinary tube would reach through the opening in the trachea and remain in, so displaced was the trachea. Finally a full-sized silver catheter was passed in, and by suction and

inflation the boy was brought round completely. Four hours afterwards he suddenly pulled out the catheter and nearly died before it could be replaced. Several attempts were made to substitute some better tube for the catheter, but those used were all too short to remain in. The great difficulty with the catheter was in preventing the eye becoming choked with mucus. Expectoration increased in quantity, and pneumonia set in, from which he died, two days after the tracheotomy had been performed.

Necropsy (permission could only be obtained to examine the throat).—The trachea was found pushed over to the right side and rotated on itself. The cartilaginous rings, from the fifth to the eight inclusive, were softened and partially absorbed, thus allowing the trachea to collapse.

Remarks by Mr. TAYLER.—There are several points of interest in this case. In the first place, the boy was not a native of Derbyshire, he having only lived a few years in this district. Then it is comparatively rare for goitre to affect a boy, and before the age of puberty. Lastly, it is uncommon for so slight an enlargement of the thyroid gland to cause such serious symptoms as he presented.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Analysis of 964 Cases of Operation for Calculus in the Bladder.

AN ordinary meeting of this Society was held on March 11th, the President, Mr. Timothy Holmes, in the chair.

Sir HENRY THOMPSON communicated a paper containing an analysis of 964 cases of operation for calculus in the bladder by lithotomy and lithotrity, with remarks. The calculi removed were exhibited to the Society. The paper commenced by referring to the author's first record of 500 cases of operation for stone in the bladder in the adult male presented to the Royal Medical and Chirurgical Society in 1878 (vide Transactions, vol. lxi., p. 159). He now brought forward an additional series of 464 cases, making a total of 964, including cases of women and children. Of these, 101 cases occurred in hospital practice (University College) and 863 were treated in private. Besides these were a few cases of foreign bodies &c. removed by operation. The total number of children was 17, of women 14, leaving the number of operations on the adult male by all methods 933. Of every one of these the author possessed full notes made at the time, and exhibited every calculus (with very few exceptions) in a cabinet with numbered cells. A catalogue corresponding thereto contained a brief epitome of facts relating to the case, and the name of the medical man who sent it, with the subsequent history when obtainable. A brief account of the progress of lithotrity, from the author's earliest case (1854) until the present time, and the influence of it on his practice, was given, commencing with the method of Civiale at that time, the introduction of the aspirator for débris by Clover in 1865, and the gradually increased use of it during the next twelve years. Then followed the introduction (1878) of the great and important principle by Professor Bigelow of employing one sitting instead of several, and removing the whole of the débris at the same time, which the author at once adopted. The results of this practice were shown, on comparing his own 325 cases of the operation by a single sitting with the 475 by multiple sittings, prior to the date named, to have reduced the mortality nearly one half. The first remarkable fact obtained by analysis of the entire series was the following—namely, that stone in the bladder was not more common in children than in adult patients, as formerly supposed, due to the experience of the malady met with in hospital practice. Probably it might be so among the poorer class of the population; but it was far otherwise among those whose circumstances permitted a dietary unlimited in kind and quantity, as regards both food and drink. The following table afforded warrant for this assertion

Ages of male patients in private practice only.

Below 16 years.	16 to 24 years.	25 to 50 years.	51 to 70 years.	Above 70 years.	Total.
3	8	89	565	184	849

The mean age of the entire adult male cases was about sixty-two years and a half. The greatest age at which an operation had been performed was ninety-one years (lithotrity). The largest calculus was of uric acid, weighing fourteen ounces. The next important observation affirmed the value of the principle, long ago insisted upon by the author, of finding the calculus at the earliest date possible for the elderly adult male, in whom it so frequently occurred. Two cogent reasons existed for this: first, the stone when small was easily removed, and very little risk attended the operation; secondly, at this stage of calculus production the re-formation of an acid calculus (uric or oxalic) could almost invariably be prevented by strict dietetic precautions. A strong array of evidence was adduced in support of the foregoing. Another topic treated at length related to the choice of operation, whether by knife or by lithotrite. In the entire adult series of 933 cases 800 were by lithotrity, 115 by perineal lithotomy, and 18 by supra-pubic lithotomy. The last important subject related to the nature and causes of fatal issue following operation, and these were given in a tabular form under ten separate heads. A brief section closed the report, pointing out the most unusual cases met with, such as exfoliations of bone from the hip into the bladder as a nucleus of stone &c. Examples of encysted calculus of remarkable size and structure, besides curious foreign bodies introduced by accident or design, were related.

Mr. BRYANT said he felt uncomfortable in approaching the subject when the question of treatment was not open to discussion. It was interesting to observe how the author had been gradually swayed in his practice by the introduction of newer methods. He remarked on the enormous advance made by the introduction of the operation of lithotrity at one sitting by Bigelow, which he considered the most important since the question of operation for stone had been dealt with at all by surgeons. Referring to the change in fashion with lithotomy, he said it was evident that the lateral was gradually being put aside for the supra-pubic method. He asked under what circumstances Sir Henry Thompson would prefer the supra-pubic method to lithotrity in adults, and also under what circumstances he would adopt the supra-pubic operation in preference to the perineal one in children. All would agree with the importance of dealing with a stone at the earliest possible stage, and both physicians and surgeons were now in the habit of examining the bladder at once if there were signs of persistent irritation.

Mr. BUCKSTON BROWNE wished to remark on a point which had much exercised his mind. He scarcely knew how to classify the various kinds of calculi removed. The author had laid it down that removal of phosphatic concretions was not to be considered as an operation of lithotrity for the purposes of statistics, and he had fixed an arbitrary limit of twenty grains, to concretions below which weight the name of stone was not to be applied. Other surgeons, on the other hand, had classed as calculi stones which weighed only three or four grains. He showed a box containing nearly 300 calculi, their total weight being 170 grains, the whole of which he had removed from a bladder through a tube, a lithotrite not being used. How was such a case to be classified if one only dealt with them under the heads of cutting and crushing. He thought the time had come when three designations should be used for cutting, crushing, and washing out; lithotomy and lithotrity for the two former, while the term "litholapaxy" should be reserved to imply the removal of a stone or stones without the use of the knife or lithotrite.

Mr. HOLMES said that one of the most important points raised was the possibility of detecting and removing a stone early, and another equally important and gratifying point was the possibility of guaranteeing the patient from the risk of recurrence of stone if he would adhere to a properly regulated diet. The reintroduction of supra-pubic lithotomy made it possible to remove a mass of enlarged prostate if that condition occurred as a complication of stone. It was satisfactory to notice that in a large proportion of cases after lithotrity the cure seemed to be definite. He asked whether the children of the poor met with in hospitals were better dealt with by lithotomy or lithotrity; he had in these cases such ample reason to be satisfied with the former that he had never tried the latter; he believed, however, that the results of lithotrity in children had been exceedingly favourable in India.

Sir HENRY THOMPSON, in reply, said that he was very glad to have had the opportunity of personally bringing the subject before the Society. The question whether the

operation of lithotrity or supra-pubic lithotomy was the better operation in the adult and in the young patient respectively was an exceedingly difficult one for him to answer, believing as he did so strongly in the importance of the "personal equation" in the operator. He found, indeed, the question even more difficult to answer now than formerly. Much depended not only on the condition of the patient and the nature of the passages, but on the surgeon's own peculiar view. The higher the development of art the greater the qualifications needed in the artist. In the case of children, he had employed lithotrity for stones of moderate size, but very large ones, which some perhaps might crush, he would prefer to cut; he liked the supra pubic operation for boys, for the wound could be closed at once, but in adults he preferred a free opening, allowing drainage for some days afterwards. So also in the adult, crushing might be carried to stones of four ounces if one chose, provided a large evacuating tube could be passed. In connexion with this, he observed that the adult male of sixty-five to seventy-five possessed as a urethra a very insensitive and capacious channel, whilst the most irritable urethræ he had found in men of from twenty-five to forty, and any over-distension of these frequently gave rise to trouble. If an evacuating tube as large as No. 18 could be passed, a three-ounce uric acid stone when crushed could be removed with great facility. If he found an irritable passage with a rigid prostate, admitting only a No. 13 or 14, he preferred to employ the supra-pubic operation for a large calculus. His experience with children was small, but in them lithotomy had given good results. He looked upon the case Mr. Browne had alluded to as one of operation for gravel; he thought, however, the nomenclature suggested by him a good one. He objected to the term "litholapaxy" being used as synonymous with lithotrity, for the former word overlooked the crushing, which was the most important part of the procedure. In what he said he did not wish to be understood as undervaluing the method introduced by Bigelow; he had indeed been accused of this, as he thought, without any grounds whatever, and he wished now to make an ample *amende*, if that were necessary. He looked upon the modification introduced by Bigelow as the most important and valuable ever made in that branch of surgery. He thought it monstrous to apply the term "stone" to a case in which small gravel only had been removed; a hard-and-fast line must be drawn somewhere, and he had suggested the twenty-grain limit as a good one, and he was glad to find that Mr. Bryant approved it. The difficulty of completely evacuating a bladder had been practically abolished since the introduction of the modern powerful aspirators, but there would still be a re-formation of deposit in cases of enlarged prostate; this was only to be prevented by frequently washing out the bladder. The regulation of the diet he believed to be a most important factor in preventing the re-formation of uric acid stone.

MEDICAL SOCIETY OF LONDON.

Presidential Address — Paroxysmal Hurry of the Heart — Treatment of Lateral Spinal Curvature by Rachilysis.

AN ordinary meeting of this Society was held on March 10th, the President, Mr. J. Knowsley Thornton, in the chair.

A vote of thanks to the retiring President, Dr. Theodore Williams, was proposed by Dr. Gilbart Smith, and seconded by Dr. T. Outterson Wood. A similar vote to the council and officers was proposed by Dr. Symes Thompson, and seconded by Mr. Meredith. Both were carried unanimously.

The PRESIDENT gave a short address on taking the chair for the first time. He expressed his thanks to the Fellows for the honour that had been conferred upon him, and was glad to find that the pursuit of a special line of practice did not bar the way to the presidential chair. He considered that the modern tendency was towards specialism, though it was wiser for younger men to see first the general run of practice before devoting themselves to a special branch. He trusted that in the coming session the papers would be of a practical character, records of facts being given upon which opinions could be expressed, and he asked especially that unsuccessful cases might be brought forward; for from these the most valuable lessons for the future were to be learnt. On the clinical evenings he hoped that the endeavour would be to introduce a number of typical instances of disease rather than mere clinical curiosities. During the remainder of the session much good material was promised, and one or two evenings, probably during April, would be set apart for the discussion of the subject of Abdominal Surgery. Professor Senn of Chicago had promised to visit the Society either during April or October, and introduce for discussion the subject of Intestinal Surgery.

Dr SAMUEL WEST then read a paper on Paroxysmal Hurry of the Heart, which will be published in full in our next issue. The following were the chief points. He said that the characteristic symptom of this affection was a sudden attack of extremely rapid action of the heart, in which the beats might run up to 200 or 300 in the minute. Often there was palpitation, but not always, and sometimes cardiac pain. The attacks came on without any assignable cause, and ceased as abruptly. They might, though not necessarily, incapacitate the patient for the time, but when the attack was past no further inconvenience was felt. The paroxysms varied in duration from a few minutes to several hours or even days, and the intervals between them were equally variable, sometimes extending to years. In many cases there was no evidence of heart lesion, though at the time of the attack the heart might be dilated. The affection might last for years without invaliding the patient except for the time of the attack. Some cases possibly recovered, but others died of cardiac failure, so that the existence of cardiac lesion could not be altogether excluded. Usually the affection did not interfere with the occupations of life permanently. The chief interest of the affection centred in the question as to its real nature. Dr. Bristowe, to whom we were indebted for the fullest account of the malady, regarded it as functional, and though there were some cases where heart disease was present, he considered it secondary to the attacks of palpitation. There appeared to be some evidence in favour of the contrary view, for several of the recorded cases gave histories which would explain the existence of heart lesion, especially of rheumatic fever and syphilis. On reviewing the cases as a whole, the probabilities seemed to be in favour of some lesion, and if so it was most likely to be one of the myocardium. This could not yet be proved, and must therefore for the present remain a matter of opinion. These cases had been brought forward because the affection seemed to be one to which less attention had been given than it merited.—Dr. GILBART SMITH said that the paper brought to mind a group of cases which were probably more numerous than most were aware of. As to the precise nature of the complaint, he thought that in all cases it was not truly organic. He related an instance under his care in the City-road Chest Hospital. The patient was admitted with extremely rapid action of the heart, and an aortic regurgitant murmur developed later. Post mortem there was found an aneurysm opposite one of the sinuses of Valsalva, and the aortic flap which corresponded to it was ruptured quite in two. He believed that in many cases the lesion might be grave enough to cause symptoms such as had been described, though not severe enough to cause death. He related two cases in which he believed that the lesion was a purely functional one. One, a medical man, had attacks of rapid cardiac action, during which the pulse became quite uncountable, and these attacks would cease quite suddenly; in another patient, a farmer and breeder of cattle, the attacks of palpitation entirely disappeared under small doses of iodide of potassium. There was in that case a specific history. Instances such as these led him to believe that there were cases which were distinctly neurotic, and which could be relieved by bromide or other anti-neurotic treatment.—Dr. PERCY KIDD said that the subject needed attention, for there were few well-described cases on record. He asked the author if he had seen cases in which reflex disturbance had played a part, such as lesions of the uterus, pregnancy, and dyspepsia. Lesion of the vagus had also been described.—Dr. JAMISON thought he saw a sort of parallelism between these cases and those of exophthalmic goitre, and he related instances which showed that their tendency was to go from bad to worse.—Dr. WEST, in reply, said he could not regard these as cases of palpitation, for the rapid action was not felt by the patient. For their causation it was necessary to have a neurotic disturbance, but he believed that organic lesion of the heart was at the bottom of most of the cases. He had not met with cases in which reflex irritation was a causative factor. Though most of the cases ended badly, he thought that in some the attacks subsided and left the

patient well. Cases with persistent cardiac acceleration belonged to a different clinical group.

Mr. BARWELL read a paper on the Treatment of Lateral Curvature of the Spine by Rachilysis. He said that many different causes might set up the initial phase of lateral curvature; it was a position in many instances forced on the spine by causes situated elsewhere, either in the body or altogether external, but throughout the first stage it remained, as far as the spine was concerned, a posture without morbid anatomy. But when this posture had continued a certain time the intervertebral discs retained the wedge shape which the sideways bend forced upon them, becoming persistently thinner on the side of the concavity. The anterior and posterior common ligaments, whose attachments on the side of convexity separated more or less widely, and on that of the concavity approximated, changed as all white fibrous tissues did under like circumstances: where constantly excessively stretched, they atrophied and became thin; where continually lax, they thickened and shortened. Therefore the margin of those two ligaments which lay next the convexity of the curve became atrophied, lengthened, and membranous; while that edge which lay in the concavity became strong, thick, and shortened. Also these ligaments after a certain time shifted their position, partly apparently by a process of gliding, and partly by actual addition of fibre along the edge subtending the concavity of the curve. For verification of these statements Mr. Barwell referred to a post-mortem examination made by himself in 1882, and to others made under more favourable circumstances by Nicoladoni, Eulenberg, and other morbid anatomists. The effect of these ligamentous changes was to bend the spine into the laterally curved form, as the knee or other joint was often tied into a flexed position by ligamentous contraction, and as in the case of joints restoration of rectitude was greatly impeded or altogether prevented, unless forcible means were used to stretch those shortened ligaments. Such application of power to the spine lying next to large cavities and important organs had met with difficulties hitherto insuperable, but which the author had overcome in the following manner. At the sides of the room he fitted an arrangement of rings and hooks from which the force worked. One padded band with loop attached was placed on the apex of the lumbar curve. The patient was inclined over against the restraint of the band until that curve was annulled or reversed, and the trunk was held in that position by a lanyard under the left axilla. Another belt with the loop in the contrary direction was placed on the apex of the dorsal curve. A system of pulleys was hitched to the loop, a wooden strut being placed between the laps of each band so as to prevent constriction. Mr. Barwell showed the action of his appliance on two boys from the Cripples' Home in Kensington, pointing out how their backs became straighter, and that the process was quite painless. Some of the Fellows measured their spines before and during the use of the power, and found in one case an increase of length of three-quarters of an inch, in the other of one inch and three-quarters—a result which showed that the spines were thereby straightened and the contracted ligaments stretched. Cases were added of very rapid amelioration, and in one still under treatment almost complete rectitude was produced in about thirteen months.—Mr. KEETLEY proposed that Mr. Barwell's paper should be referred to a subcommittee specially appointed to consider it. He referred to a paper by a French surgeon on the subject of lateral curvature, in which the proposal was made to divide muscles in order to correct the deformity.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, MARCH 5TH.

A. L. GALABIN, M.D., PRESIDENT, IN THE CHAIR.

The Change in Size of the Chest and Abdomen during the Lying-in Period and the effect of the Binder upon them.—Dr. ERNEST HERMAN read a paper on this subject. The author said there were three reasons commonly given, by medical men or by the public, for the use of the binder during the lying-in period: 1. That it gave comfort. 2 That it counteracted the injurious effect of the sudden lowering of the intra-abdominal pressure consequent on the evacuation of the uterus. Dr. Herman pointed out that it was not usually applied till after the time at which the lowering of pressure took place. 3. That it kept the waist measurement small and so preserved the figure of the patient. To judge of this it was necessary to know what changes normally took place in the lying-in period. He adduced measurements made at the General Lying-in Hospital, which showed that during the first ten days of the lying-in the circumference of the lower part of the chest (at the level of the ensiform cartilage, and also midway between this point and the umbilicus) diminished by rather more than an inch. This diminution was practically the same in primiparæ and multiparæ, and was not modified by age. The effect of the binder was ascertained by comparing different classes of patients: (1) With a binder as ordinarily applied; (2) without a binder; (3) with a binder, to the continued tightness of which special attention was given. It was found that the diminution in size of the lower part of the chest was practically the same in each class. The author therefore concluded that the ordinary binder had no effect on the waist measurement of the patient, although he did not doubt that by the use of an unyielding bandage, tightened by straps, deformity of the chest might be produced and maintained. The sole utility of the ordinary binder was as a means of comfort to the patient.—Dr. GERVIS said it had not seemed to him in practice that patients were wishful for a belt from any idea that it would influence the size of the waist, but for the support it gave to the lower abdomen, and its effect in checking any tendency to undue fulness there afterwards. He thought also that if the belt is adjusted at the beginning of labour, and tightened from time to time during its progress, it had a distinct influence in promoting uterine action and lessening any tendency to subsequent hæmorrhage.—Dr. CHAMPNEYS said that the method of binding in use at the York-road Hospital was that described by Dr. Matthews Duncan, and was most efficient and simple. He considered that the non-use of the binder led occasionally to the "pendulous belly," with all its ill consequences. The binder assists also in promoting the involution of the soft parts. He thought a binder should not extend so high as to compress the hypochondria. Binders were not used in Germany, and, in his experience, English hospital patients recovered with better figures than German women, while private patients who had experienced English and German customs preferred the former. He agreed that the binder did not prevent flooding.—Dr. BRAXTON HICKS said it was clear that the base of the thorax was expanded by the pregnant uterus. This being so the abdominal walls after delivery were unable by so much as they were elevated to apply their pressure on the abdominal contents. Blood, therefore, flowed into the abdominal cavity, and was ready to flow into the uterine cavity should the walls of this organ become atonic. He thought that if the thorax were brought to its natural size by a slight bandage it would be beneficial.—Mr. ALBAN DORAN remarked that at different periods different interpretations had been put upon the term "waist," but that it was the unsightly enlargement of the abdomen that women objected to, because it suggested mature years and gave rise to much physical discomfort.—Dr. R. BARNES also made remarks.—Dr. HERMAN, in reply, said that his statements only applied to the binder in ordinary use, put on, as was usual, after labour, and not to the abdominal bandage as an adjuvant to labour. By "waist" be understood the smallest circumference of the trunk. Women were discharged from German lying-in hospitals sooner than they were in this country, which might account for the more frequent condition of "pendulous belly." He could have understood the effect of a belt worn after the patient got up in preventing "pendulous belly," but that was not here under consideration. He thought the comfort a binder gave was a sufficient reason for using it. But it was not necessary, was not a safeguard against subsequent trouble, and he thought medical men might be guided as to its use entirely by the wishes of patients.

Apoplexy of the Ovary; Cystic Dilatation without Rupture.—Mr. ALBAN DORAN read a paper on this subject. The patient was thirty-four years old, and had borne eight children. The abdomen was unusually distended during her seventh pregnancy (1886). It remained large till the conclusion, at term, of her eighth pregnancy in the summer of 1888. The abdominal distension continued. In April, 1889, she was suddenly attacked with severe pain over the right side of the abdomen. Four weeks later the abdomen

was found distended by a globose, elastic, and freely movable tumour, which pressed downwards into Douglas's pouch. Early in September the tumour suddenly diminished in size, sinking into the pelvis. On October 23rd Mr. Knowsley Thornton operated. The tumour was removed; it proved to be the right ovary converted into an oval body, two inches and a half in its longest diameter, and with an irregular surface of a uniform dull-drab colour. The uterus and left ovary, the abdominal viscera, and the peritoneum showed no signs of disease, old or recent. The ovary formed a cyst filled with a yellow mass, which was found to be old clot. A large, well-formed corpus luteum opened out into the cavity containing the clot. The cyst wall, one-eighth of an inch thick, consisted of normal ovarian tissue bearing a few follicles. The patient made a good recovery. The attack of pain in April, 1889, probably represented the rupture of a mature follicle into the stroma. The ovary then gradually distended till the hæmorrhage ceased, and diminished in bulk as the clot contracted. The varieties of apoplexy of the ovary were described. This case was an example, not of hæmorrhage confined to the cavity of a dilated follicle, nor of hæmorrhage originating in the stroma, but of hæmorrhage into the stroma through rupture of a follicle.—Dr. AMAND ROUTH said that he could not agree with Mr. Doran's explanation of the case, because in May the tumour was a palpable cyst extending from Douglas's pouch as high as the level of the umbilicus, and in September it burst, and in the early part of October it was only the size of a small orange. Hence he believed it to have been an ovarian or broad ligament cyst, and that the changes described by Mr. Doran had taken place subsequently to the bursting.—Dr. P. HORROCKS considered apoplexy a good name, although not defensible etymologically; but in adopting it one should make it quite analogous to its meaning when applied elsewhere. He thought that hæmorrhage into Graafian follicles and into the stroma of the ovary was not so uncommon as one might have supposed from post-mortem research only.—Dr. CULLINGWORTH preferred the term hæmatoma to apoplexy. He thought the history was rather one of rupture than of gradual absorption. The fluid poured out might easily have been absorbed, leaving no trace behind. He described a case in his own practice in which an ovary had been removed by abdominal section; it was wrapped up in and adherent to the omentum, and was a mere shell filled with dark-brown pultaceous material, evidently altered blood.—Mr. DORAN, in reply, said that small extravasations of blood into the follicles and substance of the ovaries were probably frequent. The big swellings full of blood often seen on the surface of the ovaries of healthy young subjects were probably normal. He considered that the absence of signs of rupture in the peritoneal cavity conclusive against recent rupture. Extravasations of fluid into the substance of the ovary, inflammatory or otherwise, caused great pain, as in orchitis and intra-ocular inflammation, where organs with tough capsules were involved. He thought Dr. Cullingworth's case similar to one he had published in the Medico-Chirurgical Transactions for 1885. The walls of the ovary exhibited by him (Mr. Doran) were solid ovarian tissue; they bore no resemblance to the walls of a true cystoma which had partly collapsed, as in Dr. Duncan's case.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, FEB. 14TH.

MR. ARMSTRONG, PRESIDENT, IN THE CHAIR.

Public Health of Italy in 1889.—Dr. ED. WILLOUGHBY read a paper on this subject, which was, he said, a masterpiece of scientific legislation, a complete code in outline, the details of which could be from time to time filled in without necessitating the repeal of a single clause, thus strongly contrasting with our clumsy and imperfect efforts in the same direction, which had resulted in the creation of a chaos of conflicting authorities, statutes, and vested interests. Two ideas, which our legislators had utterly failed to grasp, pervaded the entire scheme. 1. That sanitation was not all that was implied in the care of the public health; but that the medical relief of the poor, the hygienic aspects of manufacturing and other industries, the health of the army, navy, and mercantile marine, the control of the sale of food, the purity of water-supplies, diseases of domestic animals, the pollution of rivers, the practice of medicine and pharmacy, registration of births and deaths, &c., were coördinate and mutually connected branches of one great department of social economy and legislation. 2. That these matters demanded special knowledge, not only in the executive officers, but also in the administrative; and that, consequently, the control of the public health could not safely be entrusted to boards elected by popular suffrage on other issues than that of special fitness—that is to say, the boards of health must be distinct from the local authorities, be composed of experts in the several branches of the science and art, and be, together with the higher sanitary officials appointed by an independent authority—viz., the Crown, so as to be uninfluenced by fear or favour of the ratepayers and the public over whose interests they had to watch. This last principle was recognised in this country in the case of inspection of mines, factories, shipping, &c.; but, with strange inconsistency, ignored in that department which concerned not fractions of the community, but the entire nation. Another feature of the Act was the judicious balance of the relative claims of central control and of local self-government, with a corresponding distribution of the fiscal burdens. While the administration of the public health, in the widest meaning of the word, devolved on the Minister of the Interior, the prefects of the provinces, and the syndics of towns and communes, the Minister and prefects respectively were advised by superior and provincial councils appointed by the Crown, composed of specially qualified physicians, engineers, chemists, pharmaceutists, veterinarians, jurists, and members conversant with administrative business; the medical and engineering members varying in number with the population, and each of the other professions having but a single representative. The heads for the time being of the medical departments of the army, navy, and mercantile marine, the agricultural and statistical offices, with a principal law officer of the Crown, were *ex officio* members of the superior council. The provincial medical officers of health were appointed by the Crown, on the recommendation of the superior council, were restricted to such practice as was consistent with their official duties, and were irremovable *dum se bene gesserint*, the members of the provincial boards being appointed for three years, but eligible for reappointment. The inferior or communal medical officers of health were appointed for three years, renewable, by the provincial board, from the most competent practitioners in their districts. It was impossible in such a paper to enter into the details of the Act, covering as it did a multitude of subjects; but there were two or three matters of such importance that they could not be passed over. One was the rigid demarcation between medical and pharmaceutical practice, medical men being strictly prohibited from dispensing and pharmaceutists from prescribing; the sale of proprietory medicines, unless approved by the superior council, was absolutely forbidden, and those medicines which alone might be supplied without an order from a medical man were indicated in the Pharmacopœia. The medical profession in Italy was, indeed, so jealous of its honour that the prohibition of dispensing was not felt as a grievance, and the relaxation of the rule under certain circumstances proposed in the special committee of Parliament was withdrawn in deference to the protest of the Medical Congress at Bologna. Another question in which Italy was already in advance of this country was the prohibition, as in Germany, of poisonous pigments in textile fabrics, wall-papers, toys, &c., no less than in articles of food. Instead, too, of the precarious method of "catching" a dealer in provisions or drugs unawares, or more often on the alert, required by our Adulteration Act, the Italian law enjoined a deliberate inspection of all his wares at uncertain intervals, while the penalties, fines and imprisonment, were much heavier than ours, which, pecuniarily considered, were too small to have any deterrent effect, especially as there was a chance of evading detection or conviction altogether. It was, he feared, utopian to hope for such a consolidation of public health legislation, complete as an outline but capable in its details of infinite development, superseding our present chaos of statutes, each one, while aiming at finality, conflicting with and overlapping the others, and worked, or deliberately evaded, by a multitude of heterogeneous authorities on whom their administration devolved. If our Legislature could be brought to approach the vast question of the public health with something of the scientific and judicial spirit and absence of party feeling and factious opposition shown by the Italian Parliament, we might find in this Act a guide, if not a model, for our own legislation in the future.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, FEB. 26TH.

MR. LAWSON TAIT, F.R.C.S., PRESIDENT, IN THE CHAIR.

Congenital Infantile Laryngeal Stridor.—Dr. SUCKLING exhibited an infant one week old suffering from laryngeal stridor. The stridor had existed from birth and was persistent, though worse at times. The mother stated that it was worse when the child was asleep and when it was made to cry. There was no sign of syphilis. Dr. Suckling had seen several such cases at the Children's Hospital. He attributed the stridor to some congenital abnormality in the larynx, possibly a recurved epiglottis. Such cases are unaffected by treatment, and the stridor gradually disappears.

General Paralysis of the Insane.—Dr. SUCKLING showed a man aged forty-three suffering from general paralysis. There was marked tremor of the facial muscles, lips, and tongue, and also of the extremities. His memory was defective and his speech slurred. The pupils were unequal at times, but responded normally to light and accommodation. He had suffered from delusions and hallucinations of sight. He was first observed to be altered two years ago. He was a musician, and the conductor of the band noticed that his playing was faulty, and he often "came in when the others had finished." He is depressed and collects rubbish at times. No cause for his illness can be discovered. His writing was characteristic of the complaint.

Melon-seed Bodies from Sheath of Tendon.—Mr. AUGUSTUS CLAY showed some melon-seed bodies removed from the sheath of the flexor tendon of the index finger. There were 173 in number, of average size, and they were all contained in the portion of the sheath corresponding to the phalanges. The swelling they caused did not reach the metacarpal bone, and simulated a whitlow, for which the patient, a washerwoman, had been previously treated for many weeks by poulticing. There had been a weakness in the finger for two years, but the swelling had only been noticed for a few months, and had increased rapidly. A creaking sensation could be felt on applying pressure, but the bodies could not be made to alter their position.

Removal of Right Upper Jaw.—Mr. M. A. MESSITER exhibited an upper jaw that he had removed from a patient aged forty. Four years previously she had some nasal polypi removed. Eighteen months ago she complained of pain and neuralgia of the right side of the face. This increased, and when seen in October, 1889, the right side of the face was protruded, the right eye was prominent and turned outwards, the nostril and naso-pharynx were blocked, and the antrum was perforated anteriorly. The superior maxilla, together with the tumour, was removed, the latter being attached to the base and pterygoid plate of the sphenoid and growing forward into the antrum. Mr. Messiter pointed out the difficulty of distinguishing fibroid from sarcomatous growths in the nose. The latter, however, generally grew from the ethmoid or sphenoid. He regarded the prognosis as good, unless there was perforation of the antrum. On section, the growth was found to be a fibro-sarcoma, and the patient so far had done well.

Specimens.—Mr. MESSITER also showed a large Gall-stone that had caused a fatal obstruction by impaction in the small intestine.—Dr. C. MARTIN showed a large Œdematous Myoma that had successfully been removed by Mr. Lawson Tait.

Dr. FOXWELL read a paper on Typhlitis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Surgical Section was held on Jan. 17th.

The High Operation for Encysted Calculus.—Mr. M'ARDLE read a paper on the High Operation for Encysted Calculus.—Mr. BARTON said the position of the stone, as described encysted immediately behind the prostate, was decidedly rare, and presented difficulties in diagnosis, as well as need for most careful consideration of the means of reaching it. He agreed in the conclusion arrived at by Mr. M'Ardle, that the suprapubic operation was the one most likely to lead to a favourable result. Some few months ago he had had to treat a somewhat similar case. His diagnosis was that he had to deal with a prostatic calculus impacted in the prostate, and also with a loose calculus in the bladder. It was impossible to reach the position of the prostatic calculus from above, and he decided against the supra-pubic operation, whereas perineal section in the median line, without the risk of lateral lithotomy being involved, was feasible, as opening a way to introduce into the bladder a lithotrite. The case went on favourably for three weeks, when the man succumbed from abscess in the kidney. The same purulent discharge continued after the operation as well as before it, in spite of repeated washing, so that the mucous membrane could not be said to furnish the pus.—Dr. COX had been consulted by Mr. M'Ardle upon the case before operating on account of the quantity of albumen in the urine, and his opinion was that this condition was the result of reflex irritation from a hard stone irritating the mucous membrane, which also accounted for every third or fourth beat of the heart being intermittent.—Mr. KENDAL FRANKS believed where the bladder was diseased, and the urine decomposing with every prospect of septic matter reaching the wound, the consensus of opinion was that the suture should not be adopted; but in healthy bladders, with healthy urine, the suture should be tried.—Mr. MYLES agreed that the supra-pubic operation presented to the average surgeon, ignorant of anatomy, easier access to the bladder than through the perineum. It was desirable to distinguish the cases suitable for the supra-pubic and those for the perineal operations.—Surgeon-Major O'FARRELL, having examined the patient operated on by Mr. M'Ardle, said it would have been a most difficult process to extract the stone by a median perineal section. He preferred using blunt-pointed scissors instead of the hernia knife, as ensuring a clean cut and certainty of where the cutting edge was engaged.—Mr. TOBIN having made some remarks, Mr. M'ARDLE, in reply, said his reason for adopting the supra-pubic method was the difficulty which he experienced on two former occasions in removing an encysted calculus by the perineum; and, in the case under notice, to get at the calculus he would have been obliged to cut through the prostate into the cellular tissue, and through the posterior wall of the bladder behind the trigone.

Reviews and Notices of Books.

Studies in Clinical Medicine. By BYROM BRAMWELL, M.D. Nos. 9 to 16. Edinburgh and London: Young J. Pentland.
Demonstrations of Clinical Medicine. By ALEXANDER MACGREGOR, M.D. No. 1. Aberdeen: Alma Mater Press. 1890.

IT is some time since we noticed the early numbers of Dr. Bramwell's serial, which continues to appear twice a month with commendable regularity. One cannot fail to be struck by the versatility and resource of the author, who is enabled to produce so much really useful matter in so many departments of clinical medicine, and to maintain his periodical deliverances at so excellent a level. He has found it expedient to depart a little from the original plan of confining himself to the discussion of cases in his clinique, and often makes a case the occasion of a somewhat lengthy essay. Thus it happens that these "Studies" now include more or less exhaustive and instructive papers upon heart disease, paralysis, acute irritant poisoning, intracranial tumours, the treatment of typhoid fever, and other subjects, some only of which are based on a case with which the remarks open. In this way Dr. Bramwell has been enabled to treat his subjects more fully than would have been possible if he had limited them to the verbatim record of what takes place in his out-patient room. In No. 14 he leads up from some interesting remarks on the habit of minute observation to a commentary on medical education and the requisites for successful medical authorship. On the latter head few are better entitled to speak. In dwelling on the amount of knowledge and labour involved in the production of a medical work, over and above mere literary skill, he says: "To acquire the practical knowledge which is essential for success requires years of reading, of study, and of patient

bedside observation; to produce the book, once the material—the practical knowledge and experience, and familiarity with the opinions of others—has been gained, requires enthusiasm, an invincible determination to succeed, the most persevering industry, and demands months or even years of sustained effort and continuous work." We would fain hope that all intending authors would take this dictum to heart. With his views on medical education, the need for an extension of time to be given to the study of the final subjects, and the futility of any reintroduction of the preliminary apprenticeship system, most will agree with him, especially as he points out that what is needed is a better preliminary education and a greater opportunity of practical instruction.

Dr. Macgregor's "Demonstrations" are published at the request of his class, for whom they are intended. The number before us contains a commentary upon a case of hemiplegia in a child, in which the points in diagnosis are clearly set forth. The publication, although of the same class as that of Dr. Bramwell, is not so ambitious, and is, moreover, obviously primarily intended as a means of education of the students for whom it was written. In this the author is to be commended.

A Manual of Palæontology for the Use of Students. By HENRY ALLEYNE NICHOLSON, Regius Professor of Natural History in the University of Aberdeen, and RICHARD LYDEKKER, B.A., F.G.S. Third Edition. Two Vols. Edinburgh: William Blackwood and Sons. 1889. Pp. 1624.

THIS beautifully got up and well illustrated work fills a gap that has been much felt in English literature, and which was but imperfectly supplied by the previous editions. The present treatise may fairly claim to take the same place in English biology that Karl Zittel's "Handbuch der Palæontologie" occupies in the German, though it is somewhat less voluminous. The first volume, devoted to the consideration of the Invertebrata, is written chiefly or exclusively by Dr. Alleyne Nicholson; the second, devoted to the Vertebrata, by Mr. Lydekker. There is a general introduction by Dr. Nicholson, which is occupied with a definition of fossils and of the nature of fossilisation; with the nature of rocks, and an account of the chief divisions of the aqueous rocks, which are divided into the mechanically formed and the chemically formed—all rocks owing their action to vital origin being included under the chemically formed; and lastly, with much interesting information in regard to the primordial types of life, the introduction of new species, the relative persistence of species in time, the relative range of morphological types in space, the extinction of morphological types, the evolution of morphological types from pre-existing forms and the general progression of organic types. In regard to the primordial forms of life, Dr. Nicholson remarks that we know nothing, and are not likely ever to know anything, of the animals and plants which really constituted the first living beings. Representatives are, however, to be found of all the invertebrate sub-kingdoms in the earliest fossiliferous deposits, such as the Cambrian and Ordovician series represented by the Harlech, Bala, and Llandeilo deposits, whilst vertebrates appear low down in the Silurian system, as in the Clinton formation of North America. Hence he concludes that a very long period must have been required for the evolution of these varied morphological types, and that the Cambrian fauna was really preceded by many antecedent fauna which are at present unknown to us. He considers that the apparent periodicity in the introduction of new species is probably due to the imperfection of the geological record, the appearance of groups of new life forms being due, not to the sudden creation of these forms, but to their introduction for the first time into the area in question; and he holds, with Darwin and Wallace, that each morphological type must have come into existence coincidently both in space and time with a pre-existing allied morphological type. The range of time through which some species extend is enormous, the most conspicuous examples being some of the Foraminifera and some Brachiopods and Cephalopods, which are to be found with little change in several geological periods; but it is remarkable that no instance is known in which a species that has once fairly died out has reappeared at a later period. The theory of evolution he considers to receive exceedingly strong support from palæontology, the chief grounds being that the primary morphological types, which are recognised amongst existing animals, are identical with the types upon which fossil animals are constructed; that the results of palæontological research have tended to greatly diminish the intervals by which allied groups of existing animals are separated, the widely diverging groups of birds and reptiles, for example, being connected by various transitional fossil forms like the pterodactyl; that many fossil animals exhibit what are termed "generalised" characters, so that if a general or ideal type, be constructed for any great group of animals—i.e., a type which shall possess all the essential characters of the group, without its non-essential ones—the fossil animals of the same group will be found to be generally nearer to this type than are its living representatives; and, lastly, strong evidence of evolution is exhibited in that there is a strong similarity in the types of life in successive faunæ and floræ. The absence of closely graduated transitional forms between allied morphological types, Dr. Nicholson attributes in part to the imperfection of the geological record, though he thinks this is not quite a sufficient explanation.

In regard to the body of the work, we can only speak in terms of praise. In discussing each group, both amongst the invertebrata and the vertebrata, a brief introductory section gives an account of the main features of the living representatives with which the fossil forms are compared. In a large number of instances an excellent woodcut is added, which greatly assists the reader, and of which there are no less than 1419, most of them original. Finally, there is a section on Palæobotany, which gives in the compass of about 150 pages the leading facts that are known in regard to fossil plants. The only fault we have to find is that the index is badly arranged, being divided into two parts, which is always annoying, for the wrong one is looked up just as often as the right one, and both are placed at the end of the second volume, necessitating both volumes being taken down from the shelf. It is, moreover, entirely unnecessary; for as the first volume deals with invertebrata and the second with the vertebrata, and the two indices are made out for these groups respectively, it would only have been necessary to page each volume separately, and place each half of the index at the end of its own volume, instead of running the paging through both volumes.

OUR LIBRARY TABLE.

The Asclepiad. No. 25, Vol. VII. By BENJAMIN WARD RICHARDSON, M.D., F.R.S. London: Longmans, Green, and Co. 1890.—As might have been expected from one who has himself been a pioneer in physiological therapeutics, the subject of death by chloroform, awakened by the report of the Hyderabad Commission, is discussed by Dr. Richardson, in the opening pages of this new volume of his *Asclepiad*, in the judicial and terse manner for which he is noted. He deals with the subject under three heads. In the first place, he discusses the differences between the effects produced by chloroform in animals and in man—by reason of

the absence in the former of the element of fear, or of that state of body in which the subject may be said to be living on the verge of death, so that the slightest external cause may determine the fatal result; and the occurrence of surgical shock, where deaths occur from "syncope under chloroform, due to the combined actions of the narcotic, the fear, and the surgical shock." Next, he treats of what he terms "physiological death from chloroform," and here he reminds us of his views enunciated twenty years ago, which practically accord with the results of the Hyderabad Commissions, that death commences with failure of the respiration. As to the *modus operandi*, there are, he points out, still some problems to be solved; but he is of opinion, from what he has seen, "that in very rapid death the effect is reflex from the respiratory surface to the respiratory centre, with in extreme cases direct action upon the arterioles of the pulmonic circulation itself, by which a fatal obstruction to the course of the blood is mechanically produced." The last head is that of "Pathological Death by Chloroform," the recognition of which, he thinks, serves to correct the impressions conveyed by experimentation, for it refers to the modes of death in the human subject, which are comprised under syncopal apnœa (most resembling the "physiological" mode), epileptiform syncope, paralysis of the heart (with paralysis of the muscular system generally), and a combination of death by chloroform and surgical shock. Artificial respiration, he urges, is the only appropriate plan of treatment of collapse from chloroform. It will be seen, then, that Dr. Richardson does not think the Hyderabad Commissions have reduced the causes of death to only one cause, and he still believes that under the conditions which prevail in chloroform administration the number of fatalities will be in the proportion he once estimated—viz., one death in 2500 administrations. The next article in this number deals with cycling, in which some wise advice is given respecting the manner of taking this form of exercise without risk of incurring the injury to bone and muscle that he shows may accrue from its immoderate and unscientific practice. Amongst the *Opuscula Practica* is an interesting note on influenza, and comparison of the recent epidemic with that of 1847 from the personal experience of the writer. The memoir and portrait, which have become such interesting features of the *Asclepiad*, are this time devoted to Monro Primus and the origin of the Edinburgh Medical School—the first of a contemplated series of sketches of the lives of the famous Edinburgh professors who did so much to advance the cause of medical education. Dr. Richardson commences in this number the reprinting of reports made by him to the British Association, two papers on nitrite of amyl, read in 1863 and 1864—reports which passed almost unnoticed at the time, but the value of which all must now freely acknowledge, anticipating, as they did, the verdict of the profession on the utility of remedies which were originally introduced from researches upon their physiological effects.

Enteric Fever in India. By J. BUTLER HAMILTON, M.D., Brigade Surgeon, Medical Staff. Allahabad. 1888.—Any contribution to medical literature which will tend to clear up the difficulties that seem to surround the discrimination of the forms of fever met with in India is welcome. The introduction by the late Dr. Woodward in the records of the War of the Rebellion of the term "typho-malarial" has been found to lead to a confusion greatly to be deprecated. Enteric fever is enteric fever in all parts of the world, but it may conceivably be modified by climate and malarial influences, as well as by the habits and mode of life of a people. We cannot do better than quote the following conclusions at which Dr. Hamilton has arrived, and which seem to be mainly in accordance with pathological teaching: (*a*) Enteric fever is a distinct disease in India, and though liable to modifications on account of the effects of climate, malaria, heat, &c., its general characteristics are practically the same as those of enteric fever as seen in Europe. (*b*) Enteric fever is not a new disease, but has been present (unrecognised) since the advent of Europeans, and possibly among the native population, for ages. (*c*) There is no such disease as "simple continued fever," and cases so-called should either fall into the category of "enteric" or "malarial." He goes on to point to the chief predisposing factors, and even admits that the disease can arise spontaneously, "as illustrated by the history of the disease in the Suakin Expedition." But he finds that impure water is the chief channel by which it is propagated. Relapses are more frequent than in Europe, pneumonia and bronchitis are less so; ambulatory and mild cases are numerous. He makes several suggestions for prophylaxis and treatment, and altogether has produced an interesting essay on an important subject.

Original Contributions to Ophthalmic Surgery. By J. R. WOLFE, M.D. London: J. & A. Churchill. 1890. This *brochure* contains six essays—viz.: 1. An Account of a Mode of Performing Extraction of Cataract. 2. An Account of a Mode of Operating for the Cure of Detachment of the Retina. 3. On a New Mode of Performing Plastic Operations. 4. An Account of a Mode of Transplanting the Conjunctiva from the Rabbit to the Human Subject. 5. A Description of a case of Total Staphyloma cured by an Operation; and, lastly, an Account of a case of Tubercle of the Iris and Ciliary Body. Most of the above-mentioned methods of operating have been already noticed in these columns, and are both ingenious and give good results. We doubt a little whether by any mode of operation vision can become normal after detachment of the retina, even if the parts about the macula have not been affected. Still, facts are stubborn things, and we will not dispute Dr. Wolfe's statements. The transplantation of conjunctiva from the rabbit in cases of symblepharon is certainly very useful and easily accomplished. The little volume will be read with interest by ophthalmic surgeons.

The Journal of Physiology. Edited by MICHAEL FOSTER, F.R.S., &c. Vol. XI., Nos. 1 and 2. Cambridge Scientific Company's Works, Cambridge. 1890.—The contents of this part are: 1. A Memoir by Dr. W. Hale White on the Effect upon the Bodily Temperature of Lesions of the Corpus Striatum and Optic Thalamus; in the course of which he shows that the influence of an anæsthetic, of trephining, of pricking the dura mater, and of lesion of the white matter is comparatively trifling and transient; whilst after lesion of the optic thalamus and of the corpus striatum the rise of temperature was marked and persistent on both sides of the body. 2. Messrs. H. P. Bowditch and W. Warren on the Knee-jerk and its Physiological Modifications. In this memoir the authors describe some ingenious apparatus they have devised and applied to determine the effect on the knee-jerk of a voluntary muscular movement executed simultaneously with the stimulus causing the knee-jerk, and also of sudden auditory, visual, and tactile sensations. As a rule, the secondary stimuli caused increase in the knee-jerk if applied within a certain period, but a reversal if that period were exceeded. Some remarkable individual variations were observed. The total number of observations was no less than 42,000. 3. Prof. Fred. Smith, M.R.C.V.S., of the Army Veterinary School, Aldershot, gives an excellent memoir on a subject that much needed investigation, and which his position has enabled him to follow out experimentally—viz., the Respiration of the Horse. 4. Dr. Sydney Ringer gives some experiments to test the Influence of Lime, Sodium, and Potassium Salts on the Development of Ova and Growth of Tadpoles. 5. Dr. Roy and Mr. Sherrington give a paper on the Regulation of the Blood-supply of the Brain. 6. Mr. Noel Paton gives the results of some observations on the Composition and Flow of Chyle from the Thoracic Duct in Man. 7. Mr.

Hunter contributes a paper on a Method of Raising the Specific Gravity of the Blood. 8. Mr. Sherrington makes an Addendum to his Note on Tracts Degenerating Secondarily to Lesions of the Cortex Cerebri. And lastly, Mr. Langley describes the Physiology of the Salivary Secretion.

Archives de Neurologie. Edited by M. BOURNEVILLE. Vol. XIX. No. 55. January, 1890.—The following papers are contained in this number:—Lateral Curvature in Sciatica, by E. Brissaud; a case of "Abasie-Astasie," a rare condition, in which, without loss of motor power, the subject is unable to coördinate his muscles for purposes of speech or for walking, is described by M. Ladame. Some clinical and experimental observations on the ill effects produced by working in compressed air are detailed by M. Catsara; and there is a critical review by M. Soury on the views of the Italian school with regard to the functions of the brain. Three new observations on Hystero-epilepsy in young boys are also described by MM. Bourneville and Sollier. As usual, the journal contains a useful summary of recent papers which have appeared in French and other journals.

THE COMBUSTIBLE GASES AS EMPLOYED IN THE MANUFACTURING INDUSTRIES.

BESIDES its general use as an illuminant, it is well known that gas is a fuel of the highest economical value. If we compare the efficiency of coal and gas as heat producers we are struck by the fact that whilst with the former only about 23 per cent. of the total heat units in the solid fuel are available, in the case of gas the proportion can be raised as high as 90 per cent. Several gases are now employed for their calorific properties, which vary amongst themselves, first, in proportion to the heat units possessed by each gas; and, secondly, as regards the quantity of diluent non-combustible gases. To make this clear to our readers we will compare the composition and properties of the four most important gases employed on an extensive scale for industrial purposes. There are (1) coal gas, (2) Siemen's gas, (3) producer gas, (4) water gas. The first of these, besides possessing considerable heating constituents, is chiefly marked by the high percentage of its illuminating elements, and in this way it contrasts strongly with the other three, which, for light-giving effects *per se*, are practically at zero. In coal gas the diluents, or non-effective gases, form about 1·5 per cent. In both Siemen's gas and producer gas, which may be roughly considered of like composition, there is about 60 per cent. of inert nitrogen as a diluent. We say inert, but this is only true in a certain sense; for when we come to consider that in the combustion of Siemen's or of producer gas the nitrogen has with the other constituents to be heated, there is necessarily a considerable waste of heat units; or, in other words, the diluent nitrogen is, so to speak, a dead weight, carried by the calorific power of the combustible components of the gases in question. Water gas, as a heat producer, stands out pre-eminently; for whilst all but devoid of illuminating constituents, the only diluent worthy of mention is carbonic acid in the proportion of about 1·5 per cent. For practical purposes water gas may be described as a mixture of hydrogen and carbonic monoxide in the proportion of 50·5 parts of the former to 44·5 of the latter. As might be inferred from the foregoing statements, the temperature of the flames of the respective gas varies enormously. The temperature of the flame of coal gas consumed with a Bunsen burner is about 2430° F. That of producer gas varies from 3060° F. to 3600° F.; whilst that of water gas is as high as 5128° F.

Starting, then, with a calorific advantage in favour of water gas, there remains for consideration the question of any further counts on the credit and debit sides of the gas. Before entering more minutely into this matter it may be well if we give a short description of the composition and manufacture of water gas. When a blast of air is driven through a column of burning fuel—e.g., coal or coke,—the gas emitted from the generator is known as "producer gas." The composition of the gas is roughly as follows:—H, 10%; CO, 26%; CH, 1·4%; N, 59%; and CO_2, 5%. The producer gas emitted from the generator can be utilised for heating boilers or giving a blast to furnaces. The formation of producer gas may be spoken of shortly as the initial step in the manufacture of water gas, for by this preliminary combustion the coke is brought to an incandescent state—the essential condition for the making of water gas. The blast of air is now shut off entirely, and a spray of water, or preferably a jet of steam, is passed into the generator containing the incandescent carbon. The high temperature of the latter decomposes the atomised water into its constituent elements. The hydrogen remains as such, whilst the oxygen combines with the carbon to form in the first instance carbonic dioxide. The latter gas, as it passes further through the incandescent coke, takes up a second atom of carbon, and carbonic monoxide is the result. A very small quantity of carbonic is not converted, and remains as an impurity. Thus, then, the making of water gas consists essentially in the rendering of coke (or anthracite coal) incandescent, and in the latter decomposing water, the final products being hydrogen and carbon monoxide, as just described. The process is necessarily an intermittent one, but there is no limit to the quantity of water gas that can be made. It takes from ten to fifteen minutes to render the carbon incandescent, and about four minutes only to completely decompose the steam, and thus evolve water gas. The latter is then conducted to the gas-holder, and from this through purifiers of iron oxide, to remove any sulphur compounds present in the gas. Water gas consists of 50·44 parts of hydrogen, 44·4 of carbon monoxide, 0·6 of marsh gas, 1·60 of carbon dioxide, and mere traces of other diluent gases.

The objections raised against water gas (purified) are (1) that it contains a very high percentage of poisonous carbon monoxide; (2) that it is colourless, odourless, and tasteless, and therefore a dangerous escape of the gas may take place into a room without the occupants being aware of the fact. If there were no means of counteracting the latter drawback it would have to be conceded that its great commercial value was far more than outweighed by the danger attending its use. Fortunately, however, the danger referred to can be minimised by the addition to the gas of some malodorous material capable of uniformly mixing with the gas, and serving as an efficient warning against an escape from badly made or neglected fittings. Hitherto two such danger signals have been employed—viz., mercaptan and pyridine—the latter derived from the destructive distillation of bones. The mercaptan, or pyridine, is made into about a 5 per cent. solution with methylated spirit. The water gas is led through the odorising apparatus, where it takes up sufficient of the scenting material to be easily recognised, even at a point of escape far distant from the odorising chamber. Although water gas contains a high percentage of carbon monoxide, it must be remembered that the other gas employed on a large scale for heating and lighting purposes also contains it in dangerous quantity Thus in coal gas there is about 7 per cent.; in Siemen's gas, 28 per cent.; and in producer gas, 26 per cent. The most serious drawback to the employment of water gas is its want of smell; but, as we have shown above, this can be overcome by scenting the gas before it reaches the supply pipes. The flame of water gas itself is of a blue colour, and of little use as an illuminant; but by letting the very hot flame play upon a comb of magnesia rods on the Fahnejelm system, the rods are rendered incandescent, and the light emitted vies with the electric light in softness, steadiness, and brilliancy. These rods only require changing every hundred hours, and the expense of their renewal is trifling. Owing to the absence of free carbon in the gas it burns free from smoke. It takes up much less oxygen from the atmosphere by its combustion than does coal gas. With a burner consuming five feet of the gas per hour, the comb gives a light equal to twenty-two candles. The total cost of production of water gas is small compared with that of ordinary coal gas. We have made an exhaustive examination of the process of manufacturing water gas, and of its employment for heating and lighting purposes in large works and in private dwellings, and can say that, so far as our investigations went, we saw no reason why it should not come into general use in this country, as it has already done on some parts of the Continent, and notably in the United States.

THE LANCET.

LONDON: SATURDAY, MARCH 15, 1890.

BY means of the Public Health Acts Amendment Bill Mr. F. S. POWELL, Mr. HASTINGS, Dr. FARQUHARSON, and other members of the House of Commons, are endeavouring to pass into law a Bill containing a number of sanitary and police clauses which are now commonly admitted into local Acts, and which have found a sufficient precedent in recent local legislation. Most of the powers are to be conferred on urban sanitary authorities only, but authority is taken to enable rural authorities to obtain them or any of them in the same way as they now obtain urban powers under Section 276 of the Public Health Act, 1875; and some few provisions—namely, those under the heading "provisions against infection"—are at once to vest in rural as well as urban authorities.

Passing by such clauses as have only an indirect application to the public health, such as those dealing with the danger of overhead telegraph and other wires, we find a number of useful clauses relating to the connexions between drains and sewers, and a much-needed general provision to prevent steam being turned into sewers. There are also provisions, based mainly on an Act already in force in Scarborough, which will, we hope, tend to the larger introduction of "public sanitary conveniences," and to their proper regulation; and certain clauses are introduced which will go to remove a difficulty, by no means uncommon in some parts of England, as to assigning responsibility for neglect and nuisance attaching to privies belonging to two or more dwelling-houses in common. The Bill also provides for the enforcement of means of adequate water flushing and of ventilation to all waterclosets, and, where required by the authority, for the ventilation of all soil pipes, and for prohibiting the use of rain pipes as soil pipes. All these requirements are at present practically limited to new constructions in towns having modern codes of by-laws; defects attaching to other closets being only dealt with in so far as they can be proved to cause actual nuisance or injury to health. We could wish that, in dealing with rain pipes, a prohibition as to their use as sewer ventilators had also been inserted.

Some provisions in the Bill seem to us to be already practically covered by existing clauses in the by-laws relating to new buildings issued by the Local Government Board. Thus, Clause 15 deals with the erection of buildings on ground made up with any offensive matter; but it hardly does it so explicitly as the model by-law, No. 9. Then Clause 17 enables urban authorities to prescribe the times for the removal or carriage through the streets of fæcal and other matters, and to compel the cleansing of any places on which such refuse has been spilled—matters which are already very commonly dealt with under modern by-laws, and as to which the Local Government Board issue definite model clauses. The principle here adopted of applying generally and by means of a statute provisions as yet only possible under by-laws is, however, a good one, and will before long need to be acted on somewhat extensively.

The provisions against infection will materially assist sanitary authorities in dealing with the disinfection of infected articles by giving them powers of entry and by imposing substantial fines for such matters as the refusal to destroy infected articles or to deliver them to public officers for disinfection free of charge. One new provision will, we trust, help to prevent the diffusion of such diseases as enteric fever and specific diarrhœa in our midden-privy towns; for it imposes a penalty on those who knowingly cast or permit the deposit of any infectious matter in any ashpit or allied structure. Speaking generally, the powers which are sought to be obtained by the Bill are intended to facilitate the performance by sanitary authorities of duties which tend to promote public health, and it is worthy of note that they are largely extracted from Acts which are already in force in Stockton, Scarborough, and Cheltenham, the sanitary authorities of which towns have themselves felt the necessity of securing such legislative rights for their own purposes.

The Bill above referred to is, however, not the only piece of sanitary legislation which is in prospect this session, for an Infectious Disease (Prevention) Bill is before the House of Commons, where it has already passed its second reading. As in the case of the previous Bill, its provisions are taken from local Acts already in force; but it is not intended that they shall be put into operation in any district except where the local authority have themselves decided to adopt them. From a medical point of view, this Bill has even more importance than the Public Health Acts Amendment Bill, and it has a semi-official tone about it, inasmuch as its principal introducer is Mr. LEES KNOLLYS, Parliamentary Private Secretary to the President of the Local Government Board. Amongst its principal provisions we find a requirement that cowkeepers and others shall, on receipt of a medical certificate to the effect that an outbreak of disease is believed to be due to milk, furnish to the local authority a list of their customers; and it is also provided that after a somewhat similar preliminary the occupier of any dairy may be prohibited from supplying milk from that dairy to the district in question. It is also added that notice of any such prohibition must be transmitted to the Local Government Board and to the County Council. But even if the notification to these bodies should, in the end, prevent the dairyman from transferring his infected milk from one sanitary district to another, it is rather a cumbrous method of attaining that very necessary end. The difficulty of extending the power of prohibition beyond the one district is, perhaps, due to the fact that the Bill is intended only to contain clauses that have already been passed into laws in local Acts; but this matter may well be looked to when the third reading comes on. As in the case of dairymen and milk vendors, so may laundresses be required, under another section, to supply lists of their customers; and the Bill also contains a number of useful clauses as to disinfection, the disposal of bodies of persons dying in infectious hospitals and elsewhere, and the detention of the infectious sick. One clause providing for the temporary shelter of families compelled to leave their homes

whilst these are being disinfected is, so far, excellent; but with regard to the provision that the local authority may supply "nurses for attendance upon persons suffering from any infectious disease within their district," we are inclined to think that any such legislation would be in an inadvisable direction. The object of the public health law is to prevent the spread of infection by securing the isolation of the sick; and the homes of people who cannot afford to provide themselves with nurses are certainly not, as a rule, the sort of dwellings in which to retain the infectious sick, even with a proper nurse. Ample provision is made in the Public Health Act, 1875, for providing hospitals with all the necessary nursing; and under that Act even a private dwelling may be temporarily taken as a hospital and supplied with nurses. But the clause in this Bill will, we fear, be likely to defeat the intention of the Act of 1875, which aims not so much at nursing the sick as facilitating the primary duty which devolves on sanitary authorities, of so isolating infectious persons as to remove them from houses which are ill adapted to retain them except at the cost of risk to the public. This is a point that should be well weighed before the Bill is allowed to become law.

NEARLY a year has elapsed since the London County Council appointed a Committee "to inquire into, and to report to the Council upon, the advantages which might be expected from the establishment, as a complement to the existing asylum system, of a hospital with a visiting medical staff, for the study and curative treatment of insanity." The report of this committee deals at some length with the inquiries and investigations which they have made on the subject, and in conclusion they recommend, among other things, "that an adequately equipped hospital, containing one hundred beds, for the study and curative treatment of insanity in pauper lunatics of both sexes, be established in the metropolis, and that it be under the control and direction of the Council." The committee give it as their opinion that the establishment of such a hospital by the London County Council would be a legitimate exercise of its powers, and a proper application of the funds of which it has control.

Nerve pathology and the treatment of diseases of the nerves, and of those diseases of the brain which are expressed mainly in motor and sensory disturbances, have made such strides of late years that it need be no matter of surprise if a strong desire is manifested to carry the methods of investigation into the pathology of those regions of the brain which are more particularly the substratum of mental action. Scientific workers in medicine can have no more legitimate or more praiseworthy practical goal than that of laying bare the processes and the laws which are at work at the point of contact and of fusion between matter and mind, or, if the phraseology be preferred, at the point where mental manifestations are the outcome of material activity. Indications are not wanting which show that the primary instigation of the recommendations of the committee lies in the laudable desire to further the acquirement of knowledge in this direction; and, so far, no one can object to the proposed experiment. Nor can it for a moment be questioned that any experiment is a desirable one which will tend to encourage the closer study of mental disease on the part of students of medicine, and which will help to prove to licensing bodies the necessity for making that study a compulsory one.

The report states that "the eminent members of the profession who were examined as witnesses by the committee, and whose names appear at the commencement of their report, were absolutely of one mind in the opinion that the proposed hospital was eminently desirable, that its establishment was likely to lead to increased knowledge of the causes and nature of insanity, and hence to better methods of prevention and of cure, and ultimately to a corresponding diminution in the heavy pecuniary burden which the malady now imposes upon the ratepayers." We confess that we would have had more confidence in the recommendations of the committee if they had been at some pains to elicit from asylum superintendents and other authorities on lunacy questions an opinion as to the more speculative and, to the ratepayer, more alluring advantages here mentioned. The weak part in the work of the committee is that they seem to have studiously avoided examining any witness whose testimony was known not to favour the proposed hospital. By this means they have been able to report an absolute unanimity in favour of the scheme on the part of the eminent medical witnesses examined.

It is quite true that the committee say they "were prepared to find, among asylum superintendents, a feeling of decided opposition to the proposed hospital." Whatever the nature or the grounds of this opposition on the part of asylum superintendents may have been, we think the committee would have been well advised if they had made a point of calling upon them as witnesses, and of hearing and sifting their objections. The following three questions were sent to every medical superintendent of a public asylum in England and Wales, and to a few other persons of admitted authority:—1. Is it your opinion that the organisation of public asylums for the insane, as at present conducted, makes sufficient provision, or allows sufficient opportunity, for the investigation of the pathology of insanity by the light of modern methods of research, or for the careful adaptation of medical or surgical treatment to the cases of individual patients? 2. If you recognise deficiencies in the directions indicated above, is it your opinion that they might be supplied, at least to some extent, by a hospital in London in which the work of the resident medical officers would be supplemented by that of a sufficiently numerous medical and surgical visiting staff, and by that of a skilled pathologist? 3. Would it be agreeable to you, if requested, to appear before the committee as a witness? The result is thus stated by the committee in their report: "Sixty-five replies to these questions were received and analysed, and the substance of them will be stated hereafter; but the committee have seen no sufficient reason for inviting any of the gentlemen who have answered to attend."

The report contains certain "preliminary considerations," dealing with the philosophy and natural history of insanity; but we take it that these are addressed to "non-medical persons." The committee relegate the phrase "diseases of the mind" to the limbo of "antiquated and misleading forms of speech." There being, therefore, no diseases of

the mind, there can be no health of the mind. Where, then, or what is mind if it is capable of neither healthy nor diseased existence? The committee say that in relation to insanity they will consider only the existence of disease of the brain. Here it is that they bring themselves into antagonism with experience in dealing with insanity as a physical disease and nothing more. They would have us believe that there are only two modes of reaching this diseased organ—viz., by medicines through the blood and by the trephine through the skull. We can understand asylum superintendents and others who have to do with the treatment of the insane objecting to be pinned down to this faith. Their experience tells them that the mind and the brain can be reached through individual channels of thought and perception, and through a host of moral influences. Whatever proportion of medical treatment a physician superintendent may think necessary for individual cases of insanity, there can be no doubt that he cannot regard himself as having acquired his ideal and successful influence and curative power with his patients until they come to look upon him as their "guide, philosopher, and friend." We regret to find that this question of medical *versus* moral treatment should crop up in the report at a somewhat unfortunate angle, for it cannot serve any satisfactory purpose in promoting the most desirable end—namely, that a general agreement on the subject should be arrived at.

We candidly admit that upon the evidence—the strong professional evidence—produced in favour of the proposed hospital the committee were justified in recommending the scheme to the Council for their consideration and adoption. If the London County Council ultimately agree, let us have such a hospital by all means; and let no means be spared to ensure the success of the experiment. If they do not sanction an expenditure (exclusive of site) of over £30,000 for the construction only of the hospital, we must then ask ourselves if there is any real reason why the whole or a portion of one of the suburban asylums under the Council should not be adapted to the proposed requirements by rearrangement of the staff and its duties and emoluments. Meanwhile the Council seem to be by no means unanimous on the subject, and at their weekly meeting last Tuesday decided to adjourn the consideration of the report for six months, and that it should be referred to the Asylums Committee for consideration and report.

AT a public meeting on behalf of the Hospital Saturday Fund held lately in the Holborn Town Hall, presided over by Lord COMPTON, many facts were stated which seemed to show that the Hospital Saturday movement is still alive, and has the prospect of raising the Fund to something like the proportions which it ought to have as the contribution of the working classes, who almost exclusively have the use of the hospitals. We rejoice that it is so. Since July last systematic visits have been paid to the whole of the workshops and places of business in the metropolis; 1100 collecting boxes have been sent out, and where possible collectors in the workshops have been appointed. Collecting boxes may not seem very effective means, but one palpable result of the increased activity of the promoters was given in the fact that whereas in January, 1889, their total receipts amounted to only £60, in January of this year they reached to £1600. There is no doubt that without effort, and with only the smallest amount of self-denial, the working classes could add very largely to the income of our hospitals, which stand so much in need of help, and have 2000 beds unoccupied because the money is not forthcoming to work them. We regret, however, to have to speak in critical terms of some of the suggestions at the meeting. We give a few sentences from the principal speeches which seem to us to call for remark. Mr. BUNN, the organising Secretary of the Fund, said the third object of the movement was to enable all who were willing to subscribe to obtain *immediately for themselves*, or for any suitable cases that may come under their notice, *hospital relief*, surgical appliances, or rest at convalescent homes. Lord COMPTON, the chairman, suggested that the hospital authorities *should arrange so that out-patients might be seen after the nominal working day was over*—that is, of course, at night. "A working man ought not," he thought, "to have to postpone from day to day going to a hospital because he was afraid of losing a day's work. A *slight case* attended to at once often prevented it from becoming a serious case, &c." Mr. GAINSFORD BRUCE, Q.C., M.P., moved: "That, in the opinion of this meeting, it is desirable that working-class representatives should be admitted to share in the government of our hospitals, dispensaries, and other medical charities of London, and that attendance should be given to out-patients at the various hospitals and dispensaries during the evening, that working men and women compelled to seek medical relief may not be compelled to lose time during working hours."

Here, then, are definite proposals, first, for opening hospitals at *night;* secondly, for the treatment of *slight* cases; and thirdly, a suggestion to all who are willing to subscribe that they are entitled to hospital relief *for themselves*, whether hospital cases or not. The proposals are the more worthy of immediate and urgent consideration because they are made by speakers who must be supposed to have weighed their remarks. We must express our extreme doubt as to the wisdom of allying the Hospital Saturday Fund with such doctrines. The out-patient department of hospitals is already almost a scandal, and here are proposals to extend it into the night, to make it a right to all who subscribe, and for slight ailments. When working men are asked for a contribution to hospitals, it is not that they may receive in return ordinary medical attendance for themselves and their families. This would be a *quid pro quo* of the most commercial character. It is that they shall make a contribution of a *charitable* character for the maintenance of those most splendid charities of which they and their order have almost the exclusive use. The opening of hospitals at night would be the signal for a wholesale development of the out-patient department which is already so overgrown as to shake the confidence of the public in hospital administration. It is surely reasonable that a working man in health and in employment should provide privately through sick clubs or other means for attendance on himself and his family. His subscription to hospitals, we repeat, is, like that of wealthier subscribers, a *charity*, a contribution for the kindly and generous treatment of those who have fared badly in the battle of life, who have sustained an accident, or been overtaken by a disease, of exceptional gravity. It is, perhaps, natural that a working man in thoughtlessness should imagine that

in giving a penny a week to hospitals he is buying or providing for ordinary medical attendance. But men of light and leading should undeceive him, or they will produce exasperation on his part and dissatisfaction on the part of regular subscribers to hospitals. Working men capable of paying for their own medical attendance, seen at hospitals, and remonstrated with on their unfitness for charitable relief, have been found to answer boldly that they would not subscribe to the Hospital Saturday Fund if they were not allowed the privilege of coming to the hospital when they pleased. This is absurd. And yet it seems to us distinctly encouraged by such speeches as were made at the meeting. We would remind the promoters of the Hospital Saturday Fund that the hospitals are mainly supported by those who never use them, and that even the Hospital Saturday Fund is largely contributed to by other than the working classes. They cannot wish to estrange these classes either from sympathy with hospitals or with the Hospital Saturday Fund. Yet this will be the certain and speedy result of regarding contributions to the Hospital Saturday Fund in the light of payments for ordinary medical attendance. The authorities of hospitals would do well to make clear at once to the promoters of the Hospital Saturday Fund that they have no sanction for representing to working men that they can alter the charitable character of hospitals and throw them open at all hours and to all cases, and to all who "are willing to subscribe." If they do not give a clear note on this subject they will lose more from the defection of other subscribers than they will gain by an increase in the Hospital Saturday Fund. Working men are as capable as other men of pure charity and of helping the unfortunate. This is what is required of them when they are asked to contribute to hospitals. We see no objection to a reasonable representation of the Hospital Saturday Fund on the Committees of Hospitals. But working men will make themselves ridiculous if they seek to rule the committees and the arrangements of hospitals in virtue of their Hospital Saturday payments.

THE question whether acquired mutilation in the parent can be transmitted to the child is one that often presents itself to the thoughtful biologist, and is one that perhaps would receive an affirmative answer from the majority of those who are unaccustomed to weigh the value of evidence. In most works on physiology in which the subject is mentioned at all, it is admitted that impressions made on the mother during pregnancy may affect the offspring, and cases are recorded where the father having a distorted finger from an injury, children were born with similarly distorted fingers; and others where accidental injury to an eye in one parent was followed by some defect of the same eye in the offspring. But when such cases are followed out, it will generally be found that they rest on hearsay, or that the facts have been observed or reported with little attention to the accuracy that is required to render them credible. DARWIN, with his usual caution, remarks in his "Animals and Plants under Domestication," that some mutilations have been practised for a vast number of generations without any inherited result, and notes, with GODRON, that different races of man have from time immemorial knocked out their upper incisors, cut off joints of their fingers, made holes of immense size through the lobes of their ears or through their nostrils, tattooed themselves, made deep gashes in various parts of their bodies, and yet that there is no reason to suppose that these mutilations have ever been inherited. DARWIN refers, indeed, to the well-known experiments of Dr. BROWN-SÉQUARD, in which certain guinea-pigs transmitted epilepsy to their descendants after injury to the spinal cord; whilst others (after injury to the sciatic nerve, leading them to gnaw off their own toes) gave birth to toeless guinea-pigs; but after alluding to many other cases which have been recorded of cats, dogs, and horses which have had their tails or legs amputated or injured, producing offspring with the same parts ill-formed, he remarks that as it is not very rare for such malformations to appear spontaneously, all such cases may be due to coincidence. Professor WEISMANN, in an essay on the supposed transmission of mutilations, expresses himself in much stronger terms. He points out that if mutilations must necessarily be transmitted, or even if they might occasionally be transmitted, a powerful support would be given to the Lamarckian principle, which is to the effect that a change in the structure of any part of an organism is chiefly brought about by exposure to new conditions of life which induces a change in habits; and this again leads to hypertrophy or atrophy of certain parts, and the modified parts are then transmitted to the offspring. On this principle LAMARCK explained the long neck and the webbed feet of the swan, and the degeneration of the eyes in the proteus. Dr. WEISMANN refers to several frequently cited cases, and shows that they either rest on insufficient evidence or that their occurrence may be explained in other ways. Thus, in the case of the tailless breed of cats in the Isle of Man, there is no evidence to show when or how it commenced; indeed, it is probable that it is the outcome of a gradual process of reduction of the length of the tail, since a similar breed is found in Japan and preserved from an idea that such animals are better mousers; whilst the number of vertebræ that are suppressed may be as many as ten. He tells a good story showing the care that should be exercised in admitting the spontaneous origin of such anomalies. Last summer Professor SCHOTTELIUS of Freiburg brought to Dr. WEISMANN a kitten with a congenital rudimentary tail, which he had accidentally discovered as one of a family of kittens at Waldkirch, a small town on the southern part of the Black Forest. The mother of the kitten possessed a perfectly normal tail; the father could not be identified. A closer investigation resulted in the following rather unexpected discovery. For some years past tailless kittens have frequently appeared in the families of many different mother cats at Waldkirch, and this fact is explained in the following manner. A clergyman who lived for some time at Waldkirch had married an English lady who possessed a tailless male Manx cat. The probability that all the tailless cats in Waldkirch are more or less distant descendants of that male cat almost amounts to certainty, and Dr. WEISMANN goes on to say since a male Manx cat has reached the Black Forest it might equally well arrive at some other place. In order to obtain

experimental evidence on the point Dr. WEISMANN mutilated a number of white mice by cutting off their tails. As the families were successively born the tail of each member was cut off, until in the course of about fifteen months 901 young produced by five generations had been thus mutilated. Yet not only was there no instance of a tailless mouse being born, but in none was the tail shorter than 10·5 millimetres, the tail of a newly born mouse varying normally from 10·5 to 12 millimetres in length. This result does not, indeed, prove that mutilations might not be inherited, but it does militate against the commonly accepted view that the mutilation of an individual is likely to be transmitted to the very next generation. The subject is one of much interest, and those who happen to meet with well-marked and well-authenticated instances of inheritance, if such cases ever occur, would do well to record them.

THE towns of Southend and Colchester are not unnaturally protesting vigorously against the proposal recently revived by Sir ROBERT RAWLINSON for the extension of the present main drainage system of London by the conveyance of the London sewage to some spot on the lower reaches of the river. For many years past, long before the appointment of the Metropolitan Sewage Discharge Commission, we have urged the adoption of a scheme substantially identical with that now propounded by Sir ROBERT RAWLINSON, but we admit most fully that the fears of the riparian proprietors on the Essex shore of the Thames are entitled to respectful consideration, and we could not recommend the adoption of any sewage scheme which would inflict serious injury on thriving and populous places. But we do not believe that with proper precautions any such injury, real or sentimental, could arise; and the urgent necessity of the metropolis, with its five millions of inhabitants, makes it imperative that no merely fanciful objections shall hinder the attainment of a radical reform.

The Metropolitan Board of Works contended with singular pertinacity, and at great cost to the ratepayers, that the discharge into the river at Barking and Crossness of the sewage of London in its crude state was not a nuisance, and inflicted no substantial injury on the river. But the evidence adduced before the Royal Commission and the reports of that Commission—one consisting of legal and scientific men of the highest standing—decisively proved that the Thames from Teddington downwards had become foully and dangerously polluted. The Commissioners, while approving of temporary palliative methods, expressed their conviction that the sewage difficulty of London could only be solved by carrying the sewage down the river at least as far as Canvey Island, and that even there it should be purified before being discharged into the river. Sir JOSEPH BAZALGETTE, who at one time believed that this scheme was practically impossible, had so far changed his opinion that he described to the Royal Commissioners the mode in which it could be executed at no extravagant cost to London. He did not, it is true, contemplate the purification of the sewage before discharge in Sea Reach, but his engineering experience affords sufficient evidence that the carriage of sewage to such a distance is neither impossible nor extravagantly expensive.

The scheme recently propounded by Sir ROBERT RAWLINSON at the Society of Arts is virtually the same as that of Sir JOSEPH BAZALGETTE, and we now greet its revival with warm approval. Of course the scheme does not depend on the selection of Canvey Island for the station of discharge. Many years ago NAPIER and HOPE proposed to take the sewage down to the Maplin Sands below Southend; to build a sea wall round them, and to fertilise them by sewage irrigation. Something of the same kind is now proposed, and it may be that this would afford a more permanent although more expensive remedy for the existing evils. It may be well here briefly to consider how far riparian interests would be affected by the treatment and discharge of sewage at Canvey Island or lower down. We are inclined to admit, in the first place, that the discharge of raw sewage at any point below Gravesend would be more or less of an evil to Southend, if not to Colchester, but we have never contemplated the discharge of raw sewage into the Thames. We fully agree with the conclusions of Lord BRAMWELL'S Commision as to the necessity of treating sewage, chemically or otherwise, before its discharge into any part of the river. But the treatment of sewage is now pretty well understood, and by chemical precipitation or land irrigation, or possibly by a combination of both, an effluent might be obtained which would not defile the waters of any tidal stream. Of course, if the sewage were applied to the Maplin Sands, previous chemical treatment would be unnecessary. Under the new scheme the danger, if any, would accrue to Southend. Canvey Island, however, is some miles above Southend, and its upper extremity is about half-way between Gravesend and Southend. We are convinced that properly constructed sewage works on Canvey Island, which might be seven miles above Southend, would inflict no nuisance on the latter place, while the effluent water would not injure the river. As to the fisheries, they would certainly be benefited rather than injured by the introduction of clarified sewage into the river. As Sir J. B. LAWES has pointed out, the phosphates and other constituents of sewage are valuable elements in the food of fish.

In conclusion, we must express our opinion that while Southend may properly object to the discharge of raw sewage at Canvey Island, or to the erection there of improperly constructed sewage works, that town would have no right to resist the demands of London if a safe and satisfactory scheme were propounded.

Annotations.

"Ne quid nimis."

THE LANCET INQUIRY INTO THE MORTALITY UNDER ANÆSTHETICS.

WE propose to issue to all the medical institutions of the United Kingdom and colonies, and as far as possible to those of America and the Continent, printed forms containing questions, which, we hope, will be carefully and conscientiously filled up by some responsible officer. And supplementally to these we this week address a personal inquiry in the shape of a form adapted for the medical profession (which will be found at page 67 of our advertising columns), and beg that those of our readers who can afford us information on the subject will kindly fill it up and return through the post to the Editors of THE LANCET. The importance of the subject is such that

no apology need be made for asking the profession to undertake the work of carefully filling in the forms. Copies of the more elaborate forms will be sent to anyone who will apply for them, assistance being invited from the whole profession. Particular attention is called to the necessity for extreme accuracy about such points as whether the heart or respiration first failed, and when any doubt exists, or when the reporter did not himself observe the fact, it is requested that some note of the circumstance be made. In every case it is desirable for the practitioner to state what anæsthetic he uses as a matter of routine, and what method he adopts in its exhibition; if an apparatus is employed, then it would be well to state what kind is made use of and whether any special precautions are adopted. The forms are made as comprehensive as possible; but if any point should occur which does not fall naturally under any of the headings given on the form, it is particularly asked that the information be furnished as a note. The labour of collating and arranging the forms will necessarily be very great; it is therefore hoped that all will help by returning them duly filled in as speedily as possible.

SMALL-POX AND THE "PECULIAR PEOPLE."

THE outbreak of small-pox amongst the "Peculiar People" at Cressing raises considerations both of general and of local importance. The "Peculiar People" number some 200 amongst the inhabitants of Cressing, and though they are not all opposed to vaccination, yet they all refuse to call in medical advice for themselves and their children when they are ill. When the disease from which they happen to be suffering is an infectious one, such a community becomes a source of public danger, since the means of preventing the spread of disease which medical advice would secure are not taken. It may be alleged that in the case of small-pox the public can protect themselves; but as to this it must be remembered that the country arrangements for vaccination are periodical only, and that a number of infants are necessarily exposed to risk if uncontrolled cases of small-pox are allowed to prevail. In this very outbreak the second case occurred in an infant who, being only seven weeks old, was unvaccinated, and who died of an hæmorrhagic attack. The law, as it at present stands, makes it somewhat difficult to bring home to these people a charge of wilful neglect, and this the more because it is not easy to prove that the parents were acquainted with the nature of the disease, neither can it always be positively alleged that life could have been saved by medical care and treatment. But it is further to be noted that in this Cressing case the local sanitary authority cannot be exonerated from responsibility and blame. They have a definite duty to protect the public health against infection, and this involves the isolation of the infectious sick. Again and again have warnings come to them as to this; Mr. Abbott, their medical officer of health, has urged them to make the necessary provision for isolation; the Local Government Board have refused to allow them to use the workhouse for that purpose, not only because of the danger to the inmates generally, but because of the wrong such an arrangement inflicts on respectable people thus to associate them with pauperism; the history of their district both in connexion with the Terling epidemic of enteric fever and the Coggeshall epidemics of diphtheria and enteric fever has shown them the results of being unprepared, as well as the costliness and the uselessness for general purposes of temporary means of isolation; but still nothing has been done. This perhaps is the explanation of their refusal to adopt the Infectious Diseases (Notification) Act, for it is properly held that one of the chief purposes to be effected by that Act is to secure the early isolation of first attacks of infectious diseases; and this can certainly not be attained at present by the Braintree rural authority. In this connexion it may be remembered that the Braintree urban district is likely some day to find itself in a similar plight; and if infection has for the same reason to remain uncontrolled in that town, the owners of the various schools and places of business may learn the needed lesson in a way that will be little pleasing to them. If the present occasion were utilised for combined action between the urban and rural authorities as to the provision of a small isolation hospital, the Cressing episode would not have been without some indirect value to the localities in question.

THE TRAINING OF TEACHERS OF THE DEAF.

AT the late conference of head-masters and others interested in the instruction of the deaf and dumb, a paper by Mr. Harry W. White, on "Training Colleges for Teachers," gave rise to a lively and instructive debate. For those directly interested the subject is indeed a most important one. In treating it the writer of this paper laid special stress on the necessity of placing candidates, who should have already become certified elementary teachers, in training colleges associated with institutions for the care of deaf mutes. By so doing, every facility would be afforded for practical instruction, which is at present somewhat defective. The history, mechanism, and phonetics of deaf-mute education, the characters of deafness, acoustics, the development of language, and kindred subjects would engage their constant attention during a curriculum of two years. This period, if well used, should suffice to produce well-qualified instructors of the deaf. In the discussion which followed the reading of these observations the general proposition that the College and the Institution were inseparable for purposes of instruction was maintained by almost every speaker. As regards the care of children out of school, it was generally agreed that this, though valuable as a means of training, was often overdone, and other important duties were consequently neglected. It is significant that some teachers advocated the training of candidates on the combined oral and manual systems. The adoption of this method was defended on the ground that certain mutes were apparently unable to acquire proficiency in the purely oral method. The paper we have here quoted, which has been published in pamphlet form, with the discussion upon it, forms a useful contribution to the literature of the subject with which it deals.

INSANITARY HOUSES AT BIRKENHEAD.

THE letter which was addressed by the President of the Local Government Board on Dec. 2nd last to urban sanitary authorities on the subject of the dwelling of the labouring classes has had the effect of revealing to the inhabitants of Birkenhead the failure of their Town Council to act upon the statutory powers conferred on them with a view to their dealing with this subject. Mr. Vacher, in reporting to them, says that summary proceedings have rarely been taken under the Public Health Act, 1875, for the closing of houses unfit for human habitation; but he adds that the Act in question is not well suited for dealing with the need for structural alterations such as are necessary in the case of back-to-back houses which are so common in the borough. Referring next to tenement houses, he says that the Town Council have not yet made use of their powers for controlling such houses by means of by-laws; and as to the occupation of cellar dwellings, which it is difficult to deal with without night inspection, he reminds the authority that they have no officer for such purpose, and this although the matter was especially brought under their notice in 1885 by Dr. Blaxall of the Local Government Board. At the

same time, he adds, the lodging accommodation available for the poor is both unsatisfactory and without efficient control. By-laws were made in 1882 to deal with common lodging-houses. At that date there were twenty-five such houses and only three were found to be adapted to their purposes. Even where control is exercised it seems to have been held that so small a cubic capacity as 250 feet per occupant was sufficient, and a recommendation to increase it to 300 cubic feet has been disregarded. So also as to the sanitary condition of common lodging-houses, it appears that the local by-laws have not been complied with. Dealing next with Torrens' Acts, Cross's Acts, and the Labouring Classes Lodging-houses Acts, 1851 to 1885, Mr. Vacher reminds the Town Council that they have taken no steps whatever under either of these statutes. Once again Mr. Vacher advises as to the action which should be taken, and he gives a list of no less than 829 houses which are condemned as insanitary. Of these, 475 are back-to-back houses, and 354 are "obstructive houses." He also again adverts to the common lodging-houses, and states that only five can be regarded as "fairly clean," the remainder being classed as "filthy" or "dirty" in varying degrees. It is not difficult to understand, after perusal of this report, why Birkenhead is one of the remaining typhus towns of England; neither is it difficult to see that a very serious responsibility attaches to the Town Council in the matter of the attitude they have so far adopted towards the question of the housing of the working-classes in the area within their sanitary jurisdiction.

THE MEDICAL SOCIETY OF LONDON.

THE 117th anniversary dinner was held at the Holborn Restaurant on Saturday evening last, the 8th inst., when the unusually large number of 123 Fellows and guests attended. The chair was filled by the retiring President, Dr. Theodore Williams. Amongst the speakers to the toasts may be mentioned the President, the President-elect (Mr. Knowsley Thornton), Sir Andrew Clark, Mr. Jonathan Hutchinson, Director General Dick, Mr. Timothy Holmes, Mr. Christopher Heath, Mr. Thomas Bryant, Sir William Mac Cormac, Sir Joseph Fayrer, Dr. Douglas Powell, Mr. Brudenell Carter, the Rev. Brooke Lambert, Mr. Edmund Owen, and the Honorary Secretaries, Dr. Charles Beevor and Mr. Ballance. Sir Joseph Lister was unfortunately prevented by illness from being present. The health of the retiring President was given by the President of the Royal College of Physicians in very happy and eloquent terms, and those present were delighted during the evening by songs from Dr. Roberts, Mr. Anderson Critchett, and Dr. Habershon, who were accompanied on the piano by the late Secretary for Foreign Correspondence, Dr. Felix Semon. The past session appears to have been remarkably successful both in the number of Fellows attending the meetings and in the interest and importance of the subjects discussed.

A PENALTY FOR OVERLAYING.

DEATH from overlaying has contributed so largely to the sum of infant mortality that hardly any suggested remedy can fail to receive due consideration. According to recent reports, there is a prospect of legislative action in the matter, and the German law, which makes it penal for a parent or nurse to share the same bed with a child under two years of age, has been quoted as a model for the proposed measure. The purpose of such Acts cannot be too highly praised. We may regret their necessity, but we can hardly deny its existence. They are, nevertheless, in some ways quite novel as portions of the English code. Thus it is a new thing, though not without precedent, that the operation of a statute should be limited to the domestic circle. It should further be noticed that the suggested rule would serve not only for the repression of cruelty or wilful neglect, but even for the prevention of accident, or of what we may call unconscious negligence. The cases to which it would apply represent all shades of responsibility, from that of actual intention down to almost unavoidable mishap. The subject is therefore one which requires somewhat careful treatment, the more so that legislative interference must be justified by actual necessity. Now, there can be no doubt that the safety of the child is only assured by the constant use of a separate crib. At the same time it must be allowed that, when taken to bed by a reasonably careful parent, the risk which it incurs is by no means a great one. Such a household regulation as the prohibition above mentioned would be exceedingly difficult to carry out in practice, though obviously effective in theory. The balance between purpose and performance would probably be better maintained by a measure which would regard every case of overlaying as implying, *ipso facto*, culpable neglect, if no graver offence, and would inflict a suitable penalty. We should thus apply a powerful preventive, and at the same time avoid interference with home life by a legislative order which might prove at once irritating and ineffectual.

BARBERS' BRUSHES AND CONTAGION.

THE frequency with which the contagion of parasitic sycosis has been traced to its source in a barber's shop is almost characteristic of the disease. In our issue dated Feb. 15th attention has once more been directed to this point in a note on four cases, all of which appear to have owed their origin to the attentions of one particular operator. The writer, probably with justice, attributes the transference of the infective germs in these cases to the use of unclean brushes and a common soap supply. He suggests that the former evil should be obviated by immersing the brush after each time of use in boiling water. As regards the soap, a safeguard already exists in the practice, now common among hairdressers, of using for each client a separate portion of soap-cream, thus avoiding all danger of intermixture. The suggestion respecting the brush is well worthy the attention of barbers, and we might add a further injunction that the water be not only boiling, but fortified in its cleansing property by some simple antiseptic. It is taken for granted that the razor being both easily and regularly cleaned is rarely, if ever, a medium of infection. The uncomfortable owner of a sycosis eruption will grant his emphatic assent to the ancient saying which lauds prevention more than cure. Since, moreover, as stated in the paper to which we have already alluded, an occasional razor cut may occasion the transference of more serious diseases by the mixture of blood with soapsuds, every cleanly precaution becomes the more imperative.

CURIOUS SUPERSTITIONS ABOUT THE DROWNED.

READERS of Mark Twain's works will have been amused by the accounts given of the methods—such as firing a cannon over the water—employed for bringing a drowned body to the surface. Similar superstitions and practices would appear to still survive in our own country. In Cambridgeshire the body of a man is supposed to have been in the water for over a week, but has not been found, although some of the villagers have paraded up and down the bank of the river, beating a drum vigorously, in the expectation that this would cause the body to float. In a similar case, where a man was drowned in the neighbouring county of Huntingdon, the body had remained embedded in the mud of the river Nene for over a month. A loaf of bread containing quicksilver had again and

again been thrown into the river, in order to make the body rise, but the operation was not more effectual, and must have been considerably more expensive than the drum-beating practised in the other case. Ultimately a reward was offered, and an experienced waterman soon indicated the position to which the currents would most probably have carried the body, and on searching there it was discovered embedded in the mud. At the inquest another curious local superstition was brought to light. An elderly man applied to the coroner for permission to place his hand on the corpse. The reason for this singular request was that the corpse had played an unpleasantly prominent part in his dreams of the previous evening, and he was convinced that actual contact with the body would effectually prevent any ghostly visitations. On being questioned, he stated that it was the custom in that district for persons to touch the bodies of their deceased friends and relatives, in order to prevent their coming unbidden into their thoughts or dreams.

BARRISTERS AND MEDICAL CHARGES.

THE *Newcastle Chronicle* expresses surprise at counsel, Mr. Walton, objecting to the charges of Dr. Crosby for a fortnight's close attendance in a case of fatal injuries from a tramcar, some of the visits being at night, and the wounds requiring dressing. The injuries included, we are informed, two fractures of the arm and a compound fracture of the foot. Twenty-eight visits were paid, and the charge was £21. Our contemporary thinks that if a barrister had to be called out at night he would be apt to require both larger fees and payment beforehand. We think so too. We need add nothing to our contemporary's excellent presentation of the case. We cannot withhold his pointed and brief contrast of the case of barristers and doctors. "As a rule, barristers have their fee beforehand; in many cases doctors are never paid at all. It has even sometimes happened that eminent counsel have pocketed fees for cases in which they have never appeared. Doctors have no such luck." Mr. Walton will perhaps be a little more careful when he has next to deal with medical fees in grave cases.

TRAINED NURSES IN PAROCHIAL INFIRMARIES.

THE Glasgow Parochial Board have recently had under consideration a motion for the employment of trained nurses in the sick wards of the city poorhouse. Dr. Lapraik, the mover, did not mince matters in describing the condition of the eighty pauper inmates at present utilised in the institution for nursing purposes. They were, he said, not only untrained, but, as a rule, incapable of receiving training; they could not read or write, and were consequently ignorant of labels, and even of the names of the patients; they could not be trusted with stimulants, and were, some of them at least, hardly under the control of the Board. Thus it happened that instructions were not carried out, medicines were wasted, and the sick fared but indifferently. Other members of the Board, while not denying the superiority of trained nurses, maintained that the present staff were equal to the duties required of them, and that no immediate change was therefore called for. We may take it for granted that the question as it presented itself to the minds of these gentlemen was mainly one of comparative economy. To this view of the matter no exception can be taken, provided that efficiency be also duly regarded. In order to secure this, which we will call the more important consideration, it is not perhaps essential, though certainly preferable, that every nurse employed should have gone through a systematic hospital course. What is, however, quite indispensable is that he or she should be of reliable character, intelligent, physically equal to the duties required, and should have had at least some experience in the practical work of nursing. Such a person, when associated with a careful practitioner, has often proved almost as efficient in illness as a fully qualified bedside attendant. With such persons at their disposal, the Glasgow guardians might do much for the comfort of their sick poor; but even in this case the addition of a few regularly trained nurses is highly advisable. Their presence would greatly increase the efficiency of the establishment, and would promote the comfort of the patients and the economy of their treatment. We would therefore advise the Board, if unable to carry out entirely the views of Dr. Lapraik, at least to provide for their wards an alliance of working common-sense with technical skill such as we have described.

THE GROWTH OF OUT-PATIENT DEPARTMENTS.

THE report of the Great Northern and Central Hospital for the year 1889 was read at the meeting of the General Council on Feb. 28th, and may be considered, on the whole, as satisfactory. The number of in-patients treated was 861, against 773 in the previous year. The total ordinary income of the year was £4557 3*s.* 11*d.*, and exceeded that of the previous year by £748 15*s.* 11*d.*; but the legacies, which constitute the extraordinary income, were £3540 less than in 1888. The steady and large increase in the number of out-patients is the least satisfactory part of the report. We find that the number of out-patients, which only three years ago was 10,000, was in 1889 15,563. Much good work is undoubtedly being done in this hospital. It is well placed for usefulness. But the rapid growth of out-patients is not a healthy sign. There are actually 3000 more cases than in the preceding year. There are slight indications in the report of a tendency to force this branch of hospital work, and to boast of it, which is to be regretted. If legacies are to increase, and public confidence is to be strengthened in hospital administration, it must be by the steady relegation of thousands of these cases to private practitioners, or to provident dispensaries. The £80 of the Hospital Saturday Fund had better be firmly declined if it involves the indiscriminate admission of every working man who has given a contribution to that fund, and who chooses to apply.

THE ROYAL BARRACKS, DUBLIN.

SOME light appears at last to have been thrown on the cause of the unhealthy condition of the Royal Barracks. In the course of the extensive alterations now being made about one-fourth of the drainage system of the barracks has been uncovered, and, according to published statements, found to be in a most disgraceful state. In the sewers running alongside of the barracks, fronting the infantry gate, "the joints of the pipes were, in a very large number of cases, found defective, and the leakage which had so long been going on was made manifest in an extremely unpleasant manner. In one place, where a 9-inch pipe joined a 15-inch one, the connexion was made with bricks and several apertures existed through which sewage percolated. An old dry drain, too, was shown, from which fetid matter had been taken out. A sewer pipe from an adjoining house was found to communicate with the main drainage pipe of the barracks; and here, also, the jointing was most defective. The man-holes in a very large number of instances were found to be in a defective condition, whilst a pipe for allowing the sewer gas to escape was discovered to have an outlet underneath a ventilator that communicated with the married men's quarters." A very serious question arises, How did it happen that this disgraceful state of the drains was not discovered by

Dr. Grimshaw and Sir C. Cameron on the occasion of their inquiry into the state of these barracks in 1887? Is it possible that they neglected to apply any of the usual tests to the drains? For it is inconceivable that had they been used such grievous defects as are now stated to have existed would have escaped detection. Or is it possible that such a condition of the drains could have been pointed out and no steps taken to remedy it? In 1888 a sum of about £1400 was expended by the War Department on these barracks, and we cannot believe that the requisite funds would have been withheld had the disgraceful state of the drains been brought to notice. There appears to be one practical lesson at least to be learned from this exposure of the condition of the Royal Barracks—viz., the imperative necessity for an examination, by competent persons, of the condition of the drains and sewers of all the barracks. Most of these barracks were built before any attention was paid to this important subject; many of them have been altered to suit more modern notions, but often, we fear, without competent knowledge on the part of those entrusted with the alterations, and before many of the precautions now deemed essential to ensure a good sanitary condition were understood. We have reason to believe that in some, perhaps many, instances, where new drains were introduced the old ones were left instead of being removed, and have since been an unsuspected cause of sickness among the troops, and that in laying the new drains precautions necessary to keep them in a satisfactory working condition, such as laying them on a bed of concrete, ventilating them, and carefully cementing the joints, were not taken. We fear also that too often there has not been an efficient practical supervision of the work done under contract. These are points which demand, and we trust will receive, the careful consideration of the branch of the War Department entrusted with the duty of housing our troops.

FISH-EATING AND LEPROSY.

MR. JONATHAN HUTCHINSON contributes to the *Friends' Quarterly Examiner* (No. 93) an interesting article upon the "Problem of Leprosy," in which he adheres as strongly as ever to the view that the disease is of dietetic origin, and that it is not contagious. He considers it proved by Hansen's researches that a bacillus is invariably present in the disease; but what, he asks, is the cause of the bacillus, and how does it gain access? In a few pages he sketches the history of leprosy, pointing out, by the way, that the leprosy of the Bible probably included many forms of curable chronic skin disease, and that the mediæval leper houses contained many who were not lepers. It is a mistake, he holds, to believe that the Crusaders introduced leprosy into Europe, for many leper-houses existed prior to the first Crusade. The disease began to decline in Europe in the fourteenth century, but it was not till 1742 that it disappeared from Shetland and the Faroe islands or from Cornwall. At the present day in England there are only a few imported cases, and no special precautions are taken against contagion; yet the disease never spreads. The United States are remarkably immune, and this in spite of the fact that emigration from the leprosy districts of Norway to the States has been very free. Noting the parts of the globe where it is still indigenous, Mr. Hutchinson points out that these are either on the sea coast or in proximity to rivers or lakes, whilst the climatic and racial conditions are extremely varied. He considers the evidence certain that the poison producing the disease gains access to the body in the form of food, and that this must be through "fish," including "edible molluscs, crustaceans, and all living denizens of water, both salt and fresh." "It may be," he adds, "that the poison is wholly absent from fish under most conditions, and present only under exceptional ones. It seems very probable that fish caught in the warm waters of the tropics is more dangerous than those from northern seas, and that all kinds of preserved or salted fish, or fish in a state of partial decomposition, are more risky than that which is fresh and sound. Lastly, it is possible that raw fish may contain a poison which is destroyed by cooking." Evidence in support of this "fish hypothesis" is cited from the reports embodied in the inquiry undertaken by the Royal College of Physicians in 1867. In spite of the arguments so ably marshaled by Mr. Hutchinson, it must be confessed that the reference of this disease to a purely dietetic cause—and he says, "it is well nigh certain that leprosy is due to some kind of unwholesome food"—entirely disregards the accumulating evidence of its transmission by contagion. Of course, it may be said it is not to contagion, but to the environment, or Mr. Hutchinson would say the diet common to all its members, that the diffusion of leprosy in a community is to be attributed. We wish we could think so, for the view is one which is far more hopeful for the extinction of the disease than any other. In the three-and-twenty years that have elapsed since the College Report was issued, on which much of Mr. Hutchinson's conclusions are based, the subject of leprosy has been more deeply studied; and we venture to think that such an inquiry as will be set on foot by the Father Damien Committee is calculated to overturn many a cherished notion regarding the origin of this remarkable and terrible affection.

THE PHYSIOLOGY OF TASTE.

THE localisation of the different forms of taste sensations is a subject which is usually cursorily passed over in text-books, with the statements that the posterior third, the tip, and sides of the tongue only are sensitive, that sweet substances are best perceived by the tip, bitter ones at the back, and so on. In the *Centralblatt für Med. Wissen.* is an abstract of extremely interesting observations by Oehrwall, who, by the aid of a lens, stimulated the individual papillæ by means of a fine brush dipped in a solution of sugar, quinine, acetic acid, and salt. He found that, as had before been observed, the circumvallate papillæ were particularly sensitive, but that on the sides and tip the fungiform papillæ only were sensitive. He estimated that in the whole tongue there were 350 to 400 of these papillæ, of which he found 125 only to respond to stimuli. Many of them appeared to be excited by all four of the substances employed, but in other cases papillæ were found to respond to one form of stimulus but not to another. Thus 19 per cent. responded to acetic acid, but not to sugar; 24 per cent. which were sensitive to acid were unaffected by quinine, while 15 per cent. which recognised sugar did not respond at all to the application of quinine. All of the papillæ were sensitive to touch, pain, heat, and cold. When stimulated by a mild faradaic current, an acid taste only was excited. He confirmed the observations of older authors that most of the anterior two-thirds of the dorsum of the tongue was devoid of gustatory papillæ.

THE DANGERS OF HYPNOTISM.

AT Nuremberg a case of some public interest has recently been tried in the police-court. A commercial traveller while in a restaurant told the waitress to look steadily at the white of his eye, and hypnotised her. On a second occasion he repeated the experiment, but this time the sleep produced was so profound that a medical man had to be called, who had the utmost difficulty in rousing the girl. The commercial traveller was according summoned to appear before the magistrates, and the severe sentence of eight days' imprisonment was passed on him, which will probably be efficient in checking similar performances in that

region. In France the practice of hypnotising people for amusement seems to be very common, and unpleasant consequences are frequently reported. At a supper party in Paris recently one of the company hypnotised a girl, and was unable to rouse her. She was consequently taken to the house of a medical man, and after a time she recovered consciousness. The whole party were taken into custody by the police, and were not released until next day. Even when hypnotism has been practised by competent medical men for remedial purposes, unpleasant accidents and ulterior consequences have again and again occurred, so much so that recently an order has been issued by the French Government prohibiting surgeons in the army and navy from practising it. It ought to be distinctly understood both by the profession and the public that hypnotism is not devoid of danger at the time, and not infrequently has permanently impaired the moral and emotional control of patients. A medical man is bound, before recommending hypnotism for a patient, to weigh the question as carefully as he would that of the advisability of administering an anæsthetic.

MILK AND RAILWAY RATES.

MR. FOX, the medical officer of health to the Rural Sanitary Authorities of the Altrincham, Congleton, and Nantwich Unions, has presented to the authorities a report on the subject of milk and railway rates, in which he fears any change for the worse in milk freights, made by the Royal Commission now engaged in inquiry on railway rates, might have a disadvantageous effect upon the public health by leading to the supplies of town milk taken from stall-fed cows, to which fresh air and even light have in some cases very limited access. If cows are likely to be affected by tubercle that likelihood would be realised in exact proportion as the cows had or had not access to fresh country air. The report states that a rational subsidy to the companies, if necessary, would be a wiser expenditure of public money than many other sanctioned expenditures which could be named, and that no such charge for conveyance should be allowed as would make it to the interest of milk-sellers in towns to keep their cattle there, instead of importing milk daily from the country.

INDIGENOUS DISEASES IN THE NORTH-WEST TERRITORIES.

DR. A. JUKES, who from the important position he has held for many years in connexion with the Canadian police has enjoyed exceptional opportunities of acquainting himself with the condition of the aborigines inhabiting the North-West territories south of the Great Saskatchewan and British Columbia as regards their indigenous diseases and the zymotic affections which civilisation has infected them with, has published an interesting paper dealing with these subjects. With regard to the indigenous diseases, these natives, like many other races, seem to have been subject to few diseases apart from those dependent on wounds and injuries, or exposure and want of food, or sometimes on intemperate indulgence when abundance supervened on long fasting. These diseases consisted chiefly of rheumatism, bronchitis, and affections of the mucous membranes generally (more especially those of the digestive organs), and occasionally fevers, attended sometimes by diarrhœa and dysentery—all of which were probably of a malarious origin. They were familiar with the noxious influences abounding in the neighbourhood of marshes and shrunken beds of rivers, more especially in the autumn, from which they occasionally suffered, but in a comparatively trifling degree, having like other indigenous races become acclimatised by long habit and exposure to conditions which exert an often fatal influence on strangers. During the summer of 1882, in the neighbourhood of old fort walls in the Cypress Hills, some 7000 Indians in a state of great destitution entirely escaped malaria, whilst the white men, though well housed and well fed, suffered severely; so that it is evident that the Indians are very much less liable to be affected by malaria than the whites. Again, they very rarely suffer from pneumonia, pleurisy, or peritonitis, however much they are exposed. They have, too, a marvellous power of recovering from wounds and injuries. Syphilis and zymotic diseases have all been introduced by the white man, and have wrought terrible havoc among them; and it would seem that struma and phthisis are also now to be found amongst them. Dr. Jukes goes on to speak of the existence of malaria north of the 50th degree of latitude, which was denied by a writer in a recent number of the *Nineteenth Century*. Unfortunately, however, it is only too real. As to the relation of contagious diseases of all kinds to the soil, the author entertains a "very strong suspicion, almost amounting to absolute belief, that all contagious diseases now known—more especially the great epidemics of the middle and earlier ages, some of which have apparently died out and disappeared—originated in progressive germs, conceived in, and developed from, some foul endemic source, under such abnormally excited or depressed spiritual conditions of humanity, as then too frequently prevailed; but which under the greater liberty and enlightenment of mankind, won by advancing science and all-conquering light, we hope may never reappear."

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

ON Thursday evening, March 6th, a special meeting of this Society was held in the Physiological class-room of University College, at which Professor Schäfer gave a demonstration of the ocular movements produced by electrical stimulation of different parts of the occipital and frontal lobes. After the demonstration, which was largely attended, Professor Schäfer, in the course of some remarks upon the results of his experiments, gave a diagrammatic representation of his views concerning the projection of the retinæ upon the occipital lobes. Mr. Victor Horsley was prevented by illness from taking part in the demonstration, and Professor Schäfer was assisted by Dr. Mott.

THE ANALYSIS OF PRESCRIBED MEDICINES.

IT would appear that the analysis of medicines dispensed from physicians' prescriptions, although properly within the province of the Food and Drugs Adulteration Act, has not as yet received any large share of attention. This is due most probably to the difficulty experienced in fulfilling all the requirements enacted by the statute. First, the inspector appointed under the Act should be under the immediate guidance of the medical officer of health; then a physician's clearly written prescription admitting of ordinary analysis must be obtained. Finally, the sample so procured is to be submitted to the public analyst, who frequently has no immediate communication with the authorities whom he serves. And, moreover, the sample has to be divided into three parts, according to the Act, so that the third part reserved for analysis, especially in the case of medicines containing drugs like quinine, will contain only a very small fraction. As pointed out by Dr. Seaton and Mr. H. D. Richmond in a paper in the current number of the *Analyst*, when writing a prescription for the purpose of obtaining a sample of medicine for analysis, regard must be had not only to the suitability of the drug, but to its exhibition in forms or doses commonly prescribed. If an inspector were to present a prescription for a quinine mixture, for example, con-

taining more than from two to five grains in a dose, the attention of the dispenser would probably soon be directed to the unusual character of the prescription, and he would therefore most likely exercise more than ordinary care in dispensing such a mixture. The subject is one of great importance, and deserves more attention than has hitherto been given to it. It is scarcely necessary to point out that it is most desirable that medicine should contain the proper quantity of active ingredient as prescribed by the practitioner. The authors have been engaged in examining medicines containing quinine, and they find the method of estimating quinine by the ammonia and ether method is lengthy and difficult, besides necessitating the use of an expensive reagent—viz., ether. They have accordingly been led to the suggestion of a method which they do not urge in the place of the ammonia one, but as a process which will enable one to decide pretty quickly whether any error in dispensing has been committed. It depends upon the facts that quinine bisulphate is neutral to methyl orange, and that the base itself has no action on phenol-phthalein. To 25 cubic centimetres of medicine two drops of methyl orange (·25 gramme per litre of water) and two drops of phenol-phthalein (·5 gramme per litre, 50 per cent. alcohol) are added. Deci-normal baryta solution is then run in, until the red colour changes to brown—that is, until the free acid is neutralised. The number of cubic centimetres used is noted. More baryta water is then added, until the pink colour of phenol-phthalein somewhat slowly appears. The difference between the two additions of baryta water, multiplied by the factor ·0218, gives the weight of quinine sulphate (7 mol. aq.) in grammes in the 25 cubic centimetres taken. Results obtained by the authors with samples of medicine compared well with those obtained by the gravimetric method. Standard solutions of quinine also gave good results. The method cannot of course be applied to medicine containing salts, the bases of which are precipitated by baryta water.

"QUOTATIONS" BY QUACKS.

THE very serious annoyance to which medical men are subjected at the hands of quacks by the misquotation of passages from their writings is an injury which there certainly ought to be no difficulty in repressing. The mischief is both a public and a private one, since unskilled readers are misled and the authors are liable to be injured, it may be seriously, in reputation by the attribution to them of opinions and utterances wholly unworthy of men of science, or perhaps unworthy of honest men. Unhappily the notion has prevailed that an eminent medical man is not liable to be injured in a pecuniary sense by the unwelcome attentions of such lowly parasites as the vendors of quackery; and upon this exceedingly narrow ground legal relief has been refused. This, for example, was the case in the suit brought by Sir James Clark to restrain a defendant named Freeman from the use of Sir James Clark's name in an advertisement of what purported quite unwarrantably to be Sir James Clark's consumption pill. The judge who decided that case in the defendant's favour thought that he had no jurisdiction to interfere in circumstances which did not involve a tangible injury to property. That, however, was a case decided so long as forty years ago, and it may well be that a more enlightened view of the rights of any man, with or without a reputation, to protect himself against an unauthorised use of his name would now obtain. Indeed, the late Lord Cairns, commenting upon the very case to which we have just referred, expressed an opinion that it had been wrongly decided, and this circumstance alone must have greatly reduced — may even, perhaps, be said to have destroyed—the value of that judgment as a precedent. We trust, then, that some one of the many eminent medical men who at the present time are subjected to the humiliation of seeing their names made use of to puff the wares of quacks will be induced to incur the trouble and expense of legal proceedings to bring some one or other of the offenders to justice, and strike a wholesome dread into the rest. It is much to be wished that the law upon the point were more unmistakable than it is; indeed, it seems to us that when once it appears that there is any room for argument at all as to the legal right of an author to restrain the misuse of his own name to authenticate something which he has never approved, a case is shown, and even a strong one, for a remedy to be applied either by a well-considered judgment which would establish the law on a sound basis, or for still more formal legislation by Act of Parliament.

A NOVEL ENDOSCOPE.

DR. F. HENEL, jun., of New York, describes in the *New York Medical Journal* of Feb. 22nd a very simple form of endoscope, which he asserts is also very efficient. It consists of a truncated cone of metal or vulcanite, the narrow end of which is passed into the urethra until the meatus is plugged by it. The broad end of the cone is oblique and closed by a glass lens. By means of a rubber ball and tube air can be forced into the speculum and through it into the urethra. Dr. Henel states that when the urethra is thus distended with air a great length of the urethra is exposed to view, and can be accurately examined.

THE LONDON SCHOOL BOARD AND ITS MEDICAL OFFICER.

IN a recent article we discussed the inadequacy of the salary offered by the London School Board for the appointment of medical officer. The duties obviously were full of importance to the public, and the Board proposed to pay only £400 a year to an officer who was expected to devote the whole of his time to those duties. We now learn that a gentleman has been appointed who we cannot believe will abandon the other offices he holds, among these being that of medical officer of health. The School Board therefore must have altered its intentions as to the duties which must devolve upon the officer, and must have departed from the advertised condition that no other appointment was to be held by their officer. We do not propose at the present moment to discuss the question whether the Board is likely to be better served by one officer giving a part of his time or by another giving the whole of his time; but it is quite obvious that a very different class of man would apply under the two circumstances. The point we desire to emphasise is the impropriety of a public body altering the terms of an advertised appointment without the reissue of an advertisement. The proper course for the Board to have adopted was to reconsider the whole question, to take counsel with those competent to give advice, and then to have invited applications under the new conditions. The Board recently has not appeared in a good light before the public, and its behaviour in regard to so important a matter as the appointment of a medical officer cannot escape criticism.

CHLORAL POISONING BY MISADVENTURE.

A VERY painful case of death from an overdose of chloral is reported from Oakham. The practitioner was much overworked, and got a neighbouring chemist's assistant to help him to dispense. In this particular instance he seems to have dictated to the dispenser, who, misunderstanding his instructions and the nature of the preparation of chloral—a strong solution of the drug—gave an enormous dose—600 grains. The lady was pregnant.

She soon became unconscious; labour came on and slight consciousness returned, but she finally died in about thirty-six hours. At the inquest subsequently held the following verdict was returned: "We find that Harriet Ellen Newton met with her death from misadventure, caused by an overdose of chloral hydrate given through a misunderstanding between doctor and dispenser in the preparation of the prescription, which arose from undue haste on the part of the doctor, owing to pressure of business on that day." The inquiry lasted six hours and a half. The moral of such an accident, as rare as it is sad, is too obvious to be pointed. The best way of preventing its recurrence is to put it on record, for the study and the warning of all prescribers and dispensers.

SIR RICHARD OWEN.

THE statements that have been made in the general press regarding the health of the illustrious man of science, Sir Richard Owen, are somewhat misleading. Sir Richard Owen has been much prostrated by a physical accident, and is easily wearied upon exertion; but there is no paralysis, local or general, his mind is quite clear, his memory of past events good, and his spirits cheerful. He is able to interest himself by reading, takes note of the current events of the day, and greets his old friends, Sir James Paget, Dr. Günther, and Dr. Richardson, who have been to see him, with much warmth and pleasure. That the great age of Sir Richard Owen lends its anxieties to his family and many friends—including the Princess Mary, who scarcely permits a day to pass without making a personal inquiry after him—is quite true; but we may indulge in the hope that with the occurrence of more genial weather he may rally, and, like his venerable neighbour and senior, Sir Edwin Chadwick, resume those favourite pursuits and communings with Nature which our Harvey found to be the happy solace of declining years.

MEDICINE FOR POOR CITIZENS AT THE COST OF THE STATE.

BY a law just voted in the Swiss Canton of Basle every citizen having an income of less than 1200 fr.—say, £50—is to be entitled to gratuitous medical attendance. The Canton is to pay the medical man and provide everything which he prescribes as necessary. We should call this pauperism, but in Switzerland, and in the fashionable language of the day, it is called "State Socialism." The poor in Switzerland are spending money very heavily in buying alcohol. A little more care in this respect would not only be for the good of the poor, but would bring many of them over the line of income at which they become entitled to have medical attendance for nothing.

THE SANITARY INSPECTORS' ASSOCIATION.

AT the last meeting of the Association of Public Sanitary Inspectors, held at Carpenter's Hall, resolutions were passed which in several respects followed the lines of our recent article on the same subject. They deal, however, with matters which we did not then enter into, such as permanency of tenure of office, dismissal from office only to be allowed in the case of proved incompetence or misconduct, and even then with right of appeal to the Local Government Board, and the receipt of an adequate minimum salary whenever the officer's whole time is required to be devoted to his duties. We fear, as regards these latter matters, that great difficulties will have to be faced. Even under the existing regulations affecting medical officers of health these conditions have not been attained; and the ground on which the Central Department has declined to assist in securing them was revealed when, in the Local Government Act, 1888, as introduced into the House of Commons, it was seen that a proposal had been inserted in a schedule to hand over to local authorities the entire control of their sanitary officers in so far as salary and tenure of office were concerned. Although that schedule was at the time withdrawn, the matters to which it related will certainly be again brought under the notice of Parliament; and it would be well to remember that the changes which are promised all tend to decentralising in the matter of appointments. Those who hold that this tendency is calculated in several important respects to affect public health administration injuriously, will doubtless be prepared to have their views set forth in both Houses of Parliament.

FOREIGN STUDENTS IN GERMANY.

THE number of foreigners—always considerable—who flock to German Universities for the completion of their education seems to be increasing. During the present session there are no less than 1930 foreigners out of the 29,000 students—that is, 6·6 per cent. of the total, which is said to be the highest proportion yet reached. During the summer session of 1889 it was 5·8. Nearly half the foreigners are Americans, and a very large proportion of the rest are Russians. Great Britain is credited with 117. Of course these figures refer to students from all the faculties.

FOREIGN UNIVERSITY INTELLIGENCE.

Berne.—Dr. Girard has been appointed Extraordinary Professor of Surgery.

Breslau.—Dr. Biermer has been obliged to obtain leave of absence on account of illness. During his absence Dr. Alexander will continue to discharge most of his duties.

Halle.—At last it seems the chair of Surgery, vacated by the death of Professor Volkmann, has been definitely filled by the appointment of Dr. Mikuliez of Königsberg.

Munich.—Professor Nussbaum has sufficiently recovered from his illness to make arrangements for resuming his lectures during the ensuing summer session.

THE report by Messrs. Crookes, Odling, and Meymott Tidy on the condition of the metropolitan water-supply gives the analysis of 189 samples of water during the month of January, and sets forth that the quality of the water supplied to the metropolis has not shown any retrogression, but has continued to be of the same high character, exceptionally high for the period of the year, recorded in their previous monthly report. As regards the water furnished by the companies taking their supply from the Thames, the maximum amount of organic carbon found in any single sample examined was 0·146 part in 100,000 parts of the water, as against a maximum of 0·153 part, and a mean part of 0·143 in the previous month's entire supply. In Dr. Franklin's report it is stated that the water drawn from the Thames by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies was much inferior in quality to that delivered at the close of last year. The heavy rains in the early part of January washed much polluting matter into the river, and taxed the filters of the companies severely. Nevertheless the water was delivered clear and efficiently filtered.

INTENDING visitors to the Berlin International Medical Congress will like to know that the Hamburg American Packet Company announce a reduction in their saloon fares from Southampton to Hamburg to members of the Congress—viz., £2 5*s.* for single and £4 for return tickets, the latter available for fifty days. The steamers call at Southampton on their way from New York to Hamburg, generally on Thursdays.

AT the meeting of the Society of Medical Officers of Health this (Friday) evening, at 8 P.M., a paper on Epidemic Influenza will be read by Dr. F. Clemow of Cronstadt, and one on Isolation and Disinfection by Dr. Paddock Bate, medical officer of health, Bethnal-green.

AT the Harveian Society on March 20th, at 8.30 P.M., Dr. Savage will open a discussion on General Paralysis of the Insane. An interesting debate is anticipated, and it is hoped that cases will be shown.

THE Governor of Hong-Kong has been pleased to appoint Mr. J. Cantlie, M.B., and Mr. J. M. Atkinson, M.B., to be Justices of the Peace for that colony.

WM. ROBERT SMITH, M.D.Aber., B.Sc.Edin., D.P.H. Camb., barrister-at-law, has been appointed Medical Officer to the London School Board.

IT is stated that Surgeon Parke, of the Army Medical Staff, will receive the honour of Companionship of the Order of St. Michael and St. George.

Pharmacology and Therapeutics.

SULPHONAL.

DR. SCHMIDT gives in his inaugural thesis at the University of Würzburg a review of everything that has been published on the effect of sulphonal. His own experiments are confined to six cases, chiefly of phthisical patients, in which he administered the drug for the relief of nocturnal sweats in doses of seven grains and a half. The result was generally favourable, and Dr. Schmidt ascribes this to a direct influence of sulphonal on the sudorific centre of the medulla oblongata. He concludes that sulphonal is a useful hypnotic in most cases in doses of from fifteen grains to two scruples. It is also successfully administered in the stage of excitement in mental disease. Digestion and circulation are rarely interfered with, but occasionally more or less vertigo or ataxy is observed in consequence. In heart disease the drug has sometimes no effect; while in other cases, especially those where the compensation is insufficient, the action of the heart is interfered with, and great care has to be used in giving sulphonal to such patients. In doses of from three grains and a half to seven grains it may be safely used to prevent excessive sweating.

TANNATE OF MERCURY IN SYPHILIS.

Dr. Petrini of Glatz, having carried out a long series of observations on the suitability of tannate of mercury in the treatment of syphilis, reports that he is well satisfied with the results obtained, the action of this preparation being more decided than that of any other mercurial, and very rarely accompanied by stomatitis or other unpleasant evidences of mercurialism. It has been found that elimination takes place mainly in the saliva, and only to a small extent in the urine. In cases where for a lengthened period three grains per diem were given, and where the urine contained 0·00034 per cent. of mercury, not the slightest sign of the month being affected was observed. A pill containing two-thirds of a grain of tannate of mercury, made up with extract of gentian, is ordered once a day with a meal; after ten days or a fortnight the dose is doubled. In this way the patient is treated for twenty-five or thirty days, until the symptoms of the disease have passed off.

SALICYLATE OF SODA PER RECTUM.

Dr. Stein of Saaz mentions in a Prague medical journal that, having a case of rheumatic fever of a severe and very obstinate nature in a lady with a very sensitive stomach, which refused to tolerate medication of any kind when administered by the mouth, he was able to treat the case satisfactorily by means of enemata of salicylate of soda. He gave three enemata daily, each containing from thirty to forty-five grains of the salicylate. The quantity of liquid used for each was about eight ounces.

HYDROFLUORIC ACID IN WHOOPING-COUGH.

Dr. B. Hernandez Briz of the General Hospital, Madrid, who had last autumn been employing hydrofluoric acid inhalations in phthisis, shortly afterwards determined to try the effect of similar treatment in whooping-cough. The result was so satisfactory that he continued to employ the method in fresh cases as they presented themselves, with equally good results. Dr. Cisneros, of the same hospital, has also made use of the hydrofluoric acid with success. He remarks that three or four inhalations are sufficient, and that it is inadvisable to continue them longer lest they should act on the pneumogastric nerve and excite spasmodic action. Dr. Perez Valdés, another friend of Dr. Briz, has also obtained good results from this treatment. He puts a tablespoonful of the acid into rather less than two quarts of water, renewing the liquid every three days; any inhaler that works satisfactorily will do. He gives the inhalations on alternate days, and confines the total number to five. He says that the cough that persists after the paroxysmal affection has subsided is simply catarrhal, and that it can be cured by ordinary treatment.

PERUVIAN BALSAM NOT AN IRRITANT TO THE KIDNEYS.

In order to find out whether Peruvian balsam exerts any stimulating effect on the secretion of urine, or whether it irritates the mucous membranes and the kidneys, Drs. Brantigam and Nowack have carried out a series of minute observations in the Dresden city hospital. These induce them to consider the assertion of Nothnagel and Rossbach, that Peruvian balsam in large doses causes intestinal catarrh and sets up inflammation in all mucous membranes, as incorrect, for though they have given as much as three ounces and a quarter during twenty-four days, they never found any darkening of the urine or any gastric or intestinal disturbance. The largest quantity given in a day was nearly half an ounce. Peruvian balsam does not, it would seem, act like copaiba and storax, since it does not contain an ethereal oil, but only cinnamic acid, benzyl ether of cinnamic acid, and resin. It must, however, be remembered that Peruvian balsam is frequently adulterated with volatile oils, and impure specimens may of course set up a very ppreciable amount of inflammation in the kidneys.

Correspondence.

"Audi alteram partem."

"A THERAPEUTICAL PARADOX: ACTION OF EXPECTORANTS."

To the Editors of THE LANCET.

SIRS,—I think nearly everyone who knows Professor Gairdner must have shared with me the pain I felt on reading the attack made upon him in THE LANCET of March 8th by Dr. Mackintosh. In a letter which contains not one word of information respecting the matter under discussion, he accuses one whom I would fain hope was not his teacher of trying to "score off another man's reputation," of conduct "as egotistical as it is primitive," and of want of patience at the neglect of his personal theories.

It is not pleasant to think that the man who has stood before the profession for nearly thirty years as professor of medicine in one of our largest schools, whose character as a man, physician, and teacher is honoured and respected, not only in his own city, but throughout the world, should be scolded for presumption and accused of unworthy motives because he ventures to draw the attention of the profession to his matured opinions on a point well within the range of the studies of a lifetime. These accusations are not less unjustifiable because they are ridiculous, but everyone who knows Dr. Gairdner will agree that he is distinguished among physicians for the sobriety of his judgment and the caution with which he adopts any theory, new or old. There is no one of comparable standing to whom we could less aptly apply Dr. Mackintosh's somewhat shaky reminder, "Theories are human, but facts are divine"!

I have no intention to enter into the discussion on expectorants, wherein Dr. Murrell appears quite able to take care of himself, for I must confess myself equally unacquainted with the theory of Dr. Gairdner; but I ask to be allowed to protest against an unprovoked and most unusual

personal attack upon an accomplished and enthusiastic teacher, whose character as a physician and a man I, in common with many others, hold in the greatest regard.

I am, Sirs, yours obediently,

ROBERT SAUNDBY, M.D., F.R.C.P.

Birmingham, March 8th, 1890.

To the Editors of THE LANCET.

SIRS,—As a student I remember with delight Professor Gairdner's lectures on the Practice of Physic at the College of Surgeons, Edinburgh, more especially that on the Pathology and Treatment of Chronic Bronchitis, of which I may add I have ample notes, but, at the same time, I consider that he is rather hard on the paradoxes of therapeutics. Therapeutics of the most advanced type abound in apparent paradoxes, which, by the way, suddenly cease to be so when we consider the *modus operandi* of the remedy and the anatomical area to which the remedy is applied. This is especially the case in remedies like expectorants. Wharton Jones has shown that the circulation in the lungs is peculiar, not only in the anatomical arrangement of its peripheral bloodvessels, but that, unlike the systemic arterioles, those in the lung and bronchial tubes are always under negative pressure; not only so, but they are found to be less under the influence of the vaso-motor system than even the vagus itself. The pulmonary arterioles are not endowed with the same contractile elements as are those of the general system. They are of a different shape and more influenced as to their calibre by the mere quality of the blood passing through them. Again, when we consider that remedies act on the lungs as they do on other vascular areas, producing diametrically opposite effects, according as the dose is large or small, we cease to wonder at the apparent paradoxes seen clinically in therapeutics. Bronchial secretion may depend on venous engorgement or arterial hyperæmia, and hence Lauder Brunton's classification into depressant and stimulating expectorants—i.e., remedies having opposite effects producing a like result. The so-called depressant expectorants no doubt increase pulmonary or bronchial secretion, and they likewise cause, or are accompanied by, a general lowering of blood pressure, as seen in the well-known action of antimony, ipecacuanha, apomorphine, potassium iodide, &c. Stimulating expectorants just as surely increase blood pressure; and though they diminish the actual amount of bronchial secretion, they increase the expulsive power of the bronchial tubes, and so increase the actual amount expelled, as seen in the action of strychnine, nux vomica, senega, copaiba, turpentine, &c. Thus both classes are true expectorants: one acting by increasing the amount secreted, the other, by acting on the respiratory centre, increasing the expulsive power of the tubes; the former lowering, the latter raising blood pressure; yet each class having its appropriate clinical and therapeutical value, and founded on a true physiological basis. In a strong man with an acute, wheezy, bronchial respiration, the result perhaps of recent chill, we give a remedy that will at once lower blood pressure and increase the bronchial secretion; in an old man, on the other hand, we give nux vomica, ammonia, &c., which, though they raise the blood pressure, do at the same time, by their action on the respiratory centres, increase the expulsive power of the bronchial tubes, and so get rid of the surplus secretion, the prime cause of the pulmonary disturbance. It is possible, as Professor Gairdner suggests, this question cannot be scientifically adjusted, and rests mainly on theory; but at the same time, clinically viewed, the two kinds of expectorants have a basis in fact, and may be accepted as a good working explanation of the "antiquated or rather superannuated doctrinal paradox."

I am, Sirs, yours truly,

JAMES MORE, M.D.

Rothwell, Northamptonshire, March 8th, 1890.

To the Editors of THE LANCET.

SIRS,—Professor Gairdner asserts that the theory of the action of expectorant remedies which has been propounded in our text-books, and which has come down to us as a heritage from the days of Cullen, is antiquated and superannuated. For his own theory, which was to have dissipated the errors of traditional dogma, he refers your readers to an article of his that appeared in the *Glasgow Medical Journal* a quarter of a century ago. As few of us are fortunate enough to possess a complete set of that publication, it is somewhat tantalising to those whose faith may have been shaken by Professor Gairdner's assertion to be referred for a more consistent and less paradoxical theory to a source which is practically inaccessible to the great majority of your readers.

I am, Sirs, yours obediently,

Walker-on-Tyne, March 10th, 1890. W. A. MACNAUGHTON.

CHEYNE-STOKES RESPIRATION.

To the Editors of THE LANCET.

SIRS,—A question has recently been asked at a meeting of the Clinical Society whether any gentleman had seen a person recover from a disease who had had as a symptom the phenomenon of Cheyne-Stokes respiration developed. Recovery from a disease when this symptom is developed no doubt is very rare; still people do recover from an affection, although this phenomenon has been present and well marked. Nearly ten years ago you did me the honour to insert in THE LANCET (Oct. 30th, 1880) cases of Cheyne-Stokes respiration under the heading "Pauses in Respiration," among which I gave the case of a lady who made a good recovery, although the symptom had been conspicuously present. About six weeks ago I had a gentleman eighty years of age under my care who presented the phenomenon of Cheyne-Stokes respiration so intensely that I did not think at the time he would recover. However, he has recovered to my great satisfaction, and I hope he will live for many years. With due regard for your valuable space, I will merely say that the gentleman's illness set in with a shivering fit, followed by a rise of temperature to 102°. He then began to cough and to complain of a choking sensation whenever he attempted to lie down. His heart's action became very irregular, but on auscultation no bruit could be heard, and his legs became œdematous, the dropsy rapidly extending above the knees. Then came delirium, a tendency to stupor and pauses in respiration, and the ascending and descending respiratory acts.

I am, Sirs, yours truly,

WILLIAM O'NEILL, M.D., M.R.C.P.

Lincoln, March 10th, 1890.

To the Editors of THE LANCET.

SIRS,—With reference to the question raised in your columns as to the possibility of recovery after the development of the above-named symptom, I beg to adduce a case of cerebral hæmorrhage which came under my observation in 1887, in which this symptom was so well developed that a most decidedly unfavourable prognosis was given, a prognosis which the sequel proved to be erroneous, as the woman recovered and is still alive, though a hemiplegic cripple. What particularly struck me in this case was the presence of a distinct amount of consciousness in spite of the Cheyne-Stokes respiration, which is so generally and so justly regarded as one of the gravest symptoms of cerebral hæmorrhage. May it not be that its occurrence, as in the case now alluded to, apart from a state of deep coma, which is its usual concomitant, renders it a less unfavourable element in prognosis?—I am, Sirs, yours faithfully,

Watton, Norfolk, March 10th, 1890. H. MALLINS, M.B.

To the Editors of THE LANCET.

SIRS,—In reference to Dr. Stephen Mackenzie's inquiry as to a case of well-marked Cheyne-Stokes respiration recovering, I should like to mention that I attended, on Feb. 4th, a woman of twenty-three, suffering from puerperal septicæmia. When called to the patient, I found her almost pulseless, scarcely conscious, and unable to speak or whisper, and with Cheyne-Stokes respiration well marked. She has since told me, unasked, that she noticed the peculiarity of her respiration, as did her friends, who "gave her up, as they had never seen people who breathed like that recover." I injected hypodermically thirty minims of pure ether, administered brandy with ether, and gave champagne every half hour. The patient rallied, and in about eight hours the breathing became more normal. She is now convalescent.

I am, Sirs, yours obediently,

Highworth, Wilts, March, 1890. G. BELBEN FLUX, M.D.

TREATMENT OF OPAQUE VITREOUS.

To the Editors of THE LANCET.

SIRS,—I must at once acknowledge the inaccuracy of the term "re-secreted vitreous" in my communication on the above subject. What I desired to convey was that by a series of limited tappings the greater part of the disorganised and opaque vitreous could be removed, its place being taken by a transparent fluid whose index of refraction is practically the same as healthy vitreous. It would, indeed, be difficult, as Mr. Hartridge states, to "get vitreous to flow along a fine trocar." I confess I have never tried this experiment, my way of evacuating it being, as previously explained, by a syringe with a large bore, and this I can assure him presents no difficulty whatever, especially as the vitreous is mostly abnormally fluid in morbid states. I do not suggest that all the vitreous should be removed, or that it is possible to evacuate every floating particle; but that it is possible in certain cases hitherto untreated to obtain by this method good results. Mr. Hartridge infers that the freshly effused serum is only temporarily transparent. This is contrary to the experience derived from cataract extractions followed by loss of large amounts of vitreous, which in many cases yield good and permanent results. It is futile to indulge in mere conjecture as to what the result of my quoted case will be in eighteen months; but if vision was benefited even for that time, it would in my opinion more than justify the operation. As regards Mr. Hartridge's remarks on the case, considering that before operation the patient could only distinguish light and that afterwards her vision = $\frac{3}{60}$ per field area, being sufficiently good to enable her to "see her way about well," I cannot think his criticism "that useful vision was not obtained" is either just or tenable. The result, at all events, compares favourably with those of Mr. Hartridge, in which the effect of treatment by pilocarpine was *nil*; but in order to obtain some accurate idea as to what amount of vision is to be considered useful, I shall feel obliged if he will state the vision before and after the injections in his two cases in which "great improvement took place," thus affording an opportunity of comparing the two methods of treatment, each of which may possess exceptional merit.

I am, Sirs, yours faithfully,

A. VERNON FORD, M.R.C.S.,
Surgeon, Portsmouth and South Hants Eye and Ear Infirmary.

Southsea, March 10th, 1890.

NEURITIS IN DIABETES.

To the Editors of THE LANCET.

SIRS,—I regret that, through a printer's error, the date of publication of Dr. Buzzard's able treatise on Neuritis should have been given in my article on the above subject as 1888 instead of 1886. I am obliged to Dr. Buzzard for drawing my attention to his subsequent papers on Neuritis, which had escaped my notice. I find, however, on referring to the paper read by him before the British Medical Association in August, 1886, that it contains no information on diabetic neuritis except the bare statement that neuritis may be associated with diabetes.

Again, the report of the case which Dr. Buzzard showed at the Harveian Society in November, 1886, and which appeared in THE LANCET for Jan. 1st, 1887, is unfortunately very meagre, and the point is almost missed, it being only casually mentioned that there was sugar in the urine. My case, which appeared in THE LANCET of March 1st, is therefore probably the first fully reported one of this affection. I was, however, careful to qualify my statement to that effect by adding the words, "as far as I know," since in consequence of the long-continued closure of the library of the Royal Medical and Chirurgical Society literary research has of late become very difficult.

I am, Sirs, yours obediently,

Harley-street, W., March 10th, 1890. JULIUS ALTHAUS, M.D.

TOXIC EFFECTS OF CANNABIS INDICA.

To the Editors of THE LANCET.

SIRS,—The following short account of symptoms experienced in my own person may be of interest to some of your readers. Not long ago, whilst suffering severely from neuralgia, I was induced by a medical man, to whom I was then acting as assistant, to take forty drops of the tincture of cannabis indica, which I did, he himself having on previous occasions done the same, with relief from neuralgia and with no unpleasant symptoms following. The neuralgia was soon forgotten, and in about an hour's time I began to feel giddy, full in the head, and very faint, and soon experienced a sensation of heaviness and numbness in the feet and legs, followed by partial anæsthesia, gradually extending upwards to the knees. My feet and legs felt as if enormously swollen and thickly covered over with wool. Soon the loss of sensation became complete as far as the knees; walking was then impossible and even standing a difficulty. Shortly similar symptoms appeared in the upper extremities, commencing at the finger tips and extending as far as the elbows. The anæsthesia was not so complete as in the lower extremities. During this time there was great anxiety and fear of death through cardiac paralysis, which seemed almost imminent. The heart's action was tumultuous and irregular. On the return of sensation to the extremities, I was possessed with an almost irresistible desire to commit suicide, by rushing into the adjoining canal or cutting my throat with the knives on the table close by, though no attempt was made at doing so. Shortly upon this I was seized with fits of alternate laughter and crying, without any apparent cause. When the symptoms were subsiding, my appetite became ravenous, accompanied by great thirst scarcely to be appeased, and then sleep intervened. The following morning I awoke, after a very sound sleep and a good night's rest, determined never again to take cannabis indica, and be most careful in prescribing it for others. I may state that I experienced no pleasurable intoxication or feeling of happiness, but the very reverse. It is well known that cannabis indica does not affect all persons similarly: some are particularly susceptible to its action, whilst others are not so. I have known a female to take forty drops of the tincture without any bad after-effects, besides a little merriment and laughter, which soon subsided.

I am, Sirs, yours faithfully,

March, 1890. W. W.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Reform.

THE Mayor of Birmingham, Mr. F. C. Clayton, has taken much interest in the question of hospital reform in all the negotiations. Through his instrumentality, his Honour Judge Chalmers has consented to act as chairman of the suggested committee of inquiry. It is considered that this committee should consist of a few in number, and that it should be composed of four members representing hospitals, not being medical men, one member representing the Hospital Saturday Committee, and three representing the profession, together with the chairman, making nine in all. The meetings are to be held on Wednesday afternoons at the Council House, and not to be longer than two hours in duration. It is to be hoped that by this business arrangement the work will be facilitated, and that some practical value will be the outcome of these deliberations.

Tricks in the Poultry Trade.

A poultry dealer was fined 10s. and costs at the police-court for exposing and selling ducks which had been blown so as to give them a deceptive appearance. The exposure will probably act as a wholesome deterrent, and at the same time put the public on their guard against an unnecessary and disgusting practice.

Lectures on Bread.

Mr. Tilden, Professor of Chemistry at Mason College, has lately delivered three interesting lectures on the above subject to the bakers of the town, the first on Products of the Mill, the second on Fermentation, and the concluding one on Bread-making. Dealing with the subjects as an experienced chemist, Mr. Tilden pointed out in a masterly manner the various fallacies and defects connected with the different processes, and dwelt upon the fact that bran has no nutritive value in so-called brown bread. A cordial vote of thanks was passed, and the hope expressed that a class might be arranged at the College suitable for journeymen bakers and apprentices.

Fire at Queen's College.

A fire broke out at Queen's College a few nights ago in

the preparing room, which might have been attended with serious consequences but for the prompt action of the fire brigade. Some friends of the College have expressed regret that it did not proceed, and thus have admitted of the reconstruction of the buildings on more convenient and modern plans. The wish was probably father to the thought, but it indicates the opinion of the disadvantages of the present edifice.

Wolverhampton General Hospital.

The annual meeting was held on the 11th inst. The report stated that the number of in-patients during the year had been 2289, out-patients 13,217. The income for the year was £7348 13*s.* 11*d.*, the expenditure £7934 9*s.* 3*d.* The chairman referred with satisfaction to the proposed new department for diseases of women.

Birmingham, March 13th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle.

THE last of the winter series of Saturday night popular lectures in connexion with the Durham College of Science, Newcastle, was delivered to a crowded audience last Saturday by Professor Oliver, Professor Philipson presiding. Newcastle has been favoured this winter by lectures of the greatest interest by first class men. In a few days we hope to hear Sir Crichton Browne, who was at one important period of his professional life intimately connected with Newcastle as a lecturer on mental diseases and superintendent of the Borough Lunatic Asylum at Coxlodge.—At the last meeting of the Wallsend Local Board the subject of building a joint hospital for Tynemouth and Wallsend was again discussed, and deferred for consideration at a future meeting. Meantime, the medical officer of health for Wallsend stated that the last severe epidemic of fever had resulted in four widows and sixteen children being left chargeable to the union authorities.

Sunderland Infirmary.

An influential and representative deputation is now in London for the purpose of arranging a conference with the Ecclesiastical Commissioners on the subject of receiving a larger contribution to the infirmary from the Commissioners than hitherto. The new wing, which was opened last year at a cost of £14,000, is free from debt, but there is still an existing debt of £3000 on the building as regards other premises and offices connected with the working of the infirmary, and it is hoped that the Ecclesiastical Commissioners, who are among the largest royalty owners in the district, may be induced to contribute more liberally to the infirmary and its extension.

Convalescent Home for Northern Friendly Societies.

The deputation of the executive committee appointed to visit Grange-over-Sands, with a view to procuring suitable premises to commence the Home for Convalescents, have been very successful, Mrs. Williams, the owner of Yewbarrow Grange, who is much interested in any worthy and philanthropic object, having in the kindest manner offered suitable accommodation to the societies rent free so as to enable them to commence operations next May. A very successful concert has also been given in Newcastle for the Home, so that it may now be considered to have passed out of the class of projects.

Hospital Sunday at Middlesbrough.

Last Sunday was observed as hospital Sunday at Middlesbrough, and collections were made in aid of the North Riding Infirmary and the North Ormesby Cottage Hospital, the Mayor and corporation, volunteers, &c., being present on the occasion.

Newcastle-on-Tyne, March 12th.

LEEDS GENERAL INFIRMARY EXTENSION. — The necessary preliminary measures are now so far advanced that it is anticipated the proposed new buildings will be shortly commenced. The extensions comprise five separate blocks of buildings—viz., a new out-patient department, a new ward pavilion, a pathological department, isolation wards, and a lodge. Throughout the new premises the floors will be fireproof.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Scottish County Councils and Medical Officers of Health.

IT has already been pointed out in these columns that, in consequence of the small size and sparse population of many of the Scotch counties, it will be a somewhat difficult matter to arrange for a perfect system of health control without some kind of rearrangement of districts. What makes this even more difficult is that the small burghs and police burghs are entirely outside the jurisdiction of the County Councils, so that, unless some arrangement can be made by which common action may be taken in connexion with the carrying out of the optional provisions of the Public Health Acts, many of them will prove futile, and the Acts must remain to such extent inoperative. The convener of one of the County Councils has recently issued a circular in which are contained suggestions as to the plan to be adopted to meet some of the difficulties above mentioned. Some of these plans are undoubtedly well conceived, but others have in view a somewhat penny-wise-and-pound-foolish policy of thinking of the ratepayers' pockets rather than of the welfare of the ratepayers in the highest economical sense. There are three alternative suggestions. One is that the smaller County Councils shall appoint medical officers, who, still keeping their practice, shall carry out the work under the County Council; that they shall be assisted by district medical officers appointed by the district committees; that where possible these shall be the men who already hold the appointments, and that in the case of those whose services are no longer required compensation shall be given. The disadvantages of this plan are obvious, and have been frequently referred to. An alternative is that Scotland shall be divided into six large combinations of counties, that at the head of each of these shall be a medical officer of health who shall not be allowed to practise, that he shall have an assistant, and that they together shall perform the duties without the aid of district medical officers of health. The centres are: Edinburgh and the surrounding counties, with a population of 210,000 and a gross rental of £1,765,000; Ayr, population 313,000, gross rental £2,900,000; Glasgow, population 260,000, gross rental £1,600,000; Stirling, population 281,000, gross rental £2,270,000; Aberdeen, population 276,000, gross rental, £1,750,000; and Inverness, population 279,000, gross rental £1,090,000. In these cases, of course, the large cities are omitted, as they have their separate councils. A third plan suggested is that the medical officer and district medical officer should be combined in one person; that of these there should be sixteen throughout Scotland, the size and value of the districts varying from that of Argyle, with a population of 56,000 and a gross rental of £370,000, to Lanark, with a population of 222,000 and a gross rental of £1,300,000. It is to be hoped that, whichever of these plans be adopted, the spirit of one of the paragraphs in the report may be avoided or kept in as great subjection as possible. The framer appears to think that the whole of the work will be done by the sanitary inspector, and he says that that being the case, "what will the medical officer have to do? There are about 300 working days in a year, and where, in most counties, a medical officer is to find 300 days of real work—not fussy make-believe work—it is difficult to say." Even conveners of County Councils have still much to learn concerning the functions and duties of a medical officer of health; when they have been able to grasp how much the community owes to medical officers (especially in recent years), there will be some hope of their appraising their services at a fair monetary value. Skilled officers of health there are, but their skill has a market value, a value they should insist on having recognised.

The Influenza Epidemic in Edinburgh.

The second of the special discussions held in connexion with the Edinburgh Medico-Chirurgical Society took place last week, when Dr. Brackenridge opened with an interesting paper on the subject. He had come to the conclusion, he said, that the commencement of the epidemic had been traced to the last week of October, and that it had become clearly prevalent in the first week of November, when a

sudden outbreak was noticeable. He was of opinion, too, that it developed itself here about the same time that it occurred in St. Petersburg. From all the observations he had made, and from a consideration of the descriptions of various typical cases described by others, he inclined to the view that this so-called epidemic influenza presented a combination of the features of influenza and of dengue, and he was of opinion that it was due to the action of a micro-organism. The disease was still going on, and he had to mention that within the last few days there had been a fresh but not very widespread outbreak. Dr. Buchan, of the Scottish Meteorological Society, considered that in the presence of the cyclone and anti-cyclone they had the conditions for the rapid diffusion at distant localities of the morbific agents. It was the general opinion that the poison, whatever it might be, acted primarily on the nervous system, though the disease seemed to be mainly fatal through diseases of the respiratory system, except in patients otherwise debilitated by disease or want, when it appeared to assist any disease affecting the patient, in such cases acting by directly decreasing the vitality of the individual. Dr. Littlejohn quoted statistics to prove that the prediction that if influenza visited this country it would not be so fatal as elsewhere, in consequence of the complete sanitary arrangements in existence here, had been verified. Only twenty deaths, he said, which could be distinctly ascribed to influenza had taken place in Edinburgh. It is well that the meteorological and statistical departments should be called in to assist in arriving at the facts connected with this disease, for, without in any way desiring to minimise the importance of recent work in connexion with the bacterial or micro-organismal nature of the disease, there can be little doubt that much remains to be done in connexion with the explanation of the conditions under which the virus of the disease can live outside the body, and can be distributed locally or to distant parts. These may be truisms, but we are too frequently in danger of forgetting them.

Health of Edinburgh.

During the month of February the total number of deaths registered in the city was 490, giving a death-rate of 21·68 per 1000 of the estimated population, compared with 367 in February, 1889, and 404 in the corresponding month of 1888. The average death-rate in the month of February in the previous five years was 16·84 per 1000; 41·42 per cent. of the deaths were registered as under five years. Deaths from diseases of the chest accounted for 31·63 per cent., 12·24 per cent. were due to debility and old age, and 21·02 to zymotic diseases. During the month there were reported 1037 cases of infectious disease, of which 22 were typhoid, 34 diphtheria, 83 scarlatina, and 893 measles. Last February there were only 161 cases of infectious disease reported, there being then only twenty-six cases of measles. In February, 1888, cases of measles were very prevalent, the number in that month being 1176, and the total number of cases of infectious disease reported was 1212. During last month 129 cases were admitted into the City Fever Hospital, 105 were discharged, and 12 died.

The Study of Infectious Disease in Edinburgh.

Dr. Jamieson, the consulting physician of the Edinburgh Fever Hospital, has from time to time intimated the measure of success that has attended his teaching in the Edinburgh City Fever Hospital. This week he has sent a report to the Public Health Committee, from which it is gathered that during the winter session of 1888–89 144 students availed themselves of the opportunity to study fever at the hospital, and that thirty-seven enrolled during the summer session. This session, 1889–90, 152 have entered the classes, and the average attendance at the Saturday morning cliniques has been very high indeed. Various attempts have been made to arrange for extra hours to be devoted to this clinical work in the Fever Hospital, but after long and careful discussion of the matter, in which Dr. Jamieson and the Students' Representative Council both took part, it was found that, in view of the numerous classes which the student has to attend, it was impossible to arrange for more frequent cliniques. Dr. Jamieson concludes that they have been singularly fortunate in having good examples of the diseases under treatment last year. No student contracted any complaint last year; this winter one student was admitted with scarlet fever, and it was quite possible, though not certain, that he might have got it in the hospital; he had an excellent recovery.

Edinburgh, March 12th.

ABERDEEN.

The University.

The winter session at Marischal College closes on Friday, the 14th inst., and the professional examinations begin on the following day. A beginning was made with the examinations in clinical medicine a week ago.

Hospital for Sick Children.

The annual meeting of the subscribers to the Aberdeen Hospital for Sick Children was held on the 6th inst. In their report the directors state that the institution is in all respects satisfactory. The income for the past year was £1719 14*s.* 3*d.*, while the expenditure was £1696 9*s.* 10½*d.* In submitting his report the treasurer stated that the cost per bed in the hospital was lower than that of any other institution in the kingdom. This, he said, was owing to the admirable management of Miss Lumsden, the honorary lady superintendent. During the year, 488 patients were treated in the wards, and of these 295 were cured, 78 improved, 30 were removed at desire or were unfit, 29 died, and 56 were remaining in the hospital on Dec. 31st. In the out-patient department there were treated during the year 835 cases. The daily average number of patients in the hospital during the year was 56, and the average length of stay of each patient was forty-two days (including 5 who died within twenty-four hours of admission). During the year 29 dental operations were performed. In the fever block there were treated 28 cases of measles and 2 of scarlet fever. During the winter 1888–89, Dr. Gordon delivered the usual course of lectures to the nurses. This hospital is fortunate in having the privilege to send its convalescents to no fewer than three cottages in the country, and during the season, from May to October, 58 children were sent to those cottages and had the benefit of a six weeks' stay in the country.

Aberdeen General Dispensary.

At the annual meeting of the managers of the Aberdeen General Dispensary, held on the 7th inst., the Chairman, Lord Provost Stewart, moved, "That the medical officers shall hold their appointments for two years after election, and be eligible for re-election unless the committee of management see cause to the contrary." This resolution was unanimously adopted.

Health of the City.

During the week ending Saturday, March 8th, sixty-six cases of zymotic diseases were reported to the medical officer of health. There were 36 cases of measles, 3 of scarlet fever, 2 of diphtheria, and 25 of whooping-cough.

Aberdeen, March 11th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Sir John Nugent.

ON Monday last his Excellency the Lord-Lieutenant conferred the honour of knighthood upon Dr. John Nugent, late Inspector of Lunatic Asylums in Ireland. Sir John Nugent is to be congratulated on this well-merited recognition of his services for many years in the Irish Lunacy Department, where he gained the esteem of all classes with whom he came in contact for his courtesy, kindness, and skill.

Simpson's Hospital, Dublin.

Dr. C. Ball has been selected by the trustees to be surgeon to this hospital, in the room of Mr. S. L. Bigger, F.R.C.S.I., resigned. Although the emoluments of the post are trifling, yet an active canvas for the appointment by many candidates has, I am informed, been carried on ever since Mr. Bigger's serious attack of illness last year.

South Dublin Union: Superannuation of Dr. C. F. Moore.

At a meeting of the guardians of the South Dublin Union held on the 6th inst., Sir George Owens, M.D., proposed that the superannuation allowance of Dr. Moore, of the South City Dispensary, be fixed at £91 a year, being an addition of five years to the amount to which he was entitled by his length of service. The motion was adopted, there being no opposition.

Health of Ireland for December Quarter.

The birth-rate for the quarter was 0·7 under the average

rate for the corresponding quarter of the previous ten years, and 0·3 under the rate for the fourth quarter of 1888. The deaths were above the number for the December quarter of 1888 to the extent of 785, or 0·8. Enteric fever, which had been prevalent in Dublin and Belfast during the previous quarter, was more fatal during the last three months of the year; while measles caused many deaths in Belfast among children, as also did scarlatina and whooping-cough. Compared with the corresponding quarter of 1888, the returns of pauperism show a decrease of 912, or 2·0 per cent., in the average number of workhouse inmates on Saturdays during the quarter, and a decrease of 160, or 0·3 per cent., in the average number of persons on out-door relief.

The Stewart Institution.

The committee, in their annual report, state that if some outstanding claims were discharged it would leave their hands free to set about providing some additional requirements still much needed at the institution. The number of beds actually available does not exceed seventy-five, and, for sanitary and other reasons, it is desirable that all these should not be filled at any particular time; yet there are at present forty candidates seeking admission. With the present staff a greatly augmented number of pupils could be maintained with a comparatively small increase of expenditure. It has been resolved to increase the accommodation by the addition of a new wing.

Royal Academy of Medicine in Ireland.

The seventh volume, that for last session, has now been issued, and some valuable papers are published in the Transactions of the Academy. In the section of Medicine there is a paper on Chromidrosis by Dr. Foot, who is an advocate of the theory that the pigment is due to the oxidation of indican eliminated by the cutaneous glands. Dr. C. Nixon details a mixed case of Typhus and Typhoid Fevers which proved fatal, and Drs. W. G. Smith and Ball are the authors of an interesting case of Cholecystotomy. In the Surgical section there is an excellent paper on a case of Pulsating Tumour of Bone, by the late Dr. McDonnell; one on Cholecystotomy, by Mr. Kendal Franks; on Stricture of the Urethra, by Mr. Tobin; and an Unusual Case of Thyroid Tumour successfully removed, by Mr. Corley.

Mr. L. H. Ormsby has been appointed by the Lord-Lieutenant a member of the Board of Governors of the Westmoreland Lock Hospital, in the room of the late Dr. Hatchell.

Mr. Austin Meldon, President of the Royal College of Surgeons, and Dr. E. Hamilton, have been appointed consulting surgeons to the National Lying-in Hospital, Dublin.

Dublin, March 11th.

BELFAST.

The Belfast District Lunatic Asylum.

AT a meeting of the Board of Governors held on March 10th an important report was submitted from Dr. Nugent, the Inspector of Lunatic Asylums, in which it was stated that the institution was in a satisfactory condition, but that as it stands the asylum was inadequate to the needs of the occupants. The crucial question was the advisability or the reverse of having two asylums, one in the county and one in the city. The board having been informed of Dr. Nugent's retirement, passed a resolution expressive of their appreciation of his services. The board also passed unanimously a motion that a second asylum should be built, and they suggested that the city of Belfast should acquire the present site and building, paying to the county Antrim their fair proportion of the value of the same towards the cost of a new asylum to be built by the county.

Queen's College.

The Professorship of Greek has been filled by the appointment of Mr. S. Dill, M.A., who was formerly a distinguished student of the College. After graduating with first-class honours in the Queen's University, Mr. Dill went to Oxford, where he obtained a first class in classical moderations and in the final classical school. He was also Fellow and Dean of Corpus Christi. He was recently head-master of Manchester Grammar School. Mr. Dill is a nephew of Dr. Dill, professor of Midwifery.

County Antrim Infirmary.

From the report presented by Mr. St. George, visiting surgeon, I gather that 415 patients were admitted during the year, and that all the operations, thirty-five in number, were successful. During the same period there were seventeen deaths. There were eighty accidents admitted into hospital, and thirty-one treated in the casualty department. There were 326 out-patients. A course of lectures on nursing was delivered to the nurses and probationers.

Belfast Royal Hospital.

At the quarterly meeting, held on Feb. 24th, it was reported that 600 in-patients had been treated in the past three months, of whom 271 were medical, the rest surgical. During the same period there were 4816 out-patients. Sufficient money has been received for the maintenance of two additional consumptive patients. At the close of the last quarter the balance against the hospital was £1996 13*s.* 1*d.* During the three months since then, and up to and for Jan. 31st, the expenditure amounted to £2445 6*s.* 5*d.*, thus bringing the total liabilities up to £4441 19*s.* 6*d.* The receipts from all sources have been £3273, leaving £1169 19*s.* 7*d.* due. During the quarter the debt has been reduced by £828 13*s.* 6*d.*, and the trust moneys increased by £500.

Belfast, March 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Comparative Action of the Iodides of Potassium and Sodium.

AT the last meeting of the Academy of Medicine Dr. Laborde read a very interesting note on the comparative action of the iodides of sodium. He pointed out an error now very prevalent in therapeutics—in considering isomeric substances as possessing the same physiological and therapeutical properties as their congeners. It is thus, for instance, that chlorate of potassium has been replaced by chlorate of sodium, iodide of potassium by iodide of sodium, &c. On the same grounds it was supposed that bromide of potassium might replace iodide of potassium in the treatment of syphilis, but the attempt was eminently unsuccessful. It was also thought preferable to administer chlorate of sodium in stomatitis, because it is more soluble than chlorate of potassium, whereas a more attentive examination would have shown that, while a solution of chlorate of potassium destroys in a short time false membranes, a solution of chlorate of sodium does not act on these morbid products. It was also thought that the alkaloids of the same family could be administered indifferently, those of cinchona, for example, whereas experiment shows that quinine has no action upon the nervous centres, whilst cinchonine and cinchonidine provoke attacks of epilepsy. It has also been proposed to administer to certain patients iodide of sodium in the place of iodide of potassium. Dr. Laborde opposed this theory, and recalled that Professor Germain Sée had long ago shown the difference of action between these two salts on the blood pressure, which is augmented by iodide of potassium, whereas iodide of sodium scarcely modifies it. These facts were already established, and he wished to find an explanation of them. He therefore experimented on non-curarised animals, and ascertained that iodide of potassium produced general tetanus, whereas experiments with iodide of sodium, even in double quantities, produced negative results. Iodide of potassium excites the nervous centres, whence its action on the vascular system and on the heart. Dr. Laborde concluded his paper by impressing on his hearers that chemical analogies could give no just appreciation of effects on the organism, and that physiological experiment alone would enable one to establish clearly the indications for the therapeutic employment of divers drugs sometimes almost similar chemically, and yet very different from a physiological and therapeutical point of view.

Frottement Périhépatique.

Dr. Bertrand, a naval medical officer stationed at Toulon, has called the attention of the Academy to a very valuable sign of abscess of the liver—viz., perihepatic friction sound (*frottement périhépatique*), not described in text-books. This perihepatic friction is perceived by the ear and by the hand applied to the right hypochondrium, more frequently at the level of the seventh or eighth intercostal space, on the anterior axillary line, which would appear to indicate the peritoneal origin of the lesion. This sign is the more important as it may precede by several days œdema

of the part. The perihepatic friction sound is, moreover, proof that the liver is fixed to the abdominal walls by the peritoneum, knowledge which is not without importance to the surgeon. In general this friction is found at the level of the point where the maximum of pain is felt. It is also at this point where parietal œdema occurs, which would indicate the spot where any exploratory puncture should be made. The author concluded his note with the advice that in an individual presumed to be affected with abscess of the liver auscultation should be employed, not only over the respiratory organs, since thoracic migration of pus may have taken place, but also over the liver, to aid in diagnosing the hepatic abscess.

Monument to Dr. Philippe Ricord.

A committee has just been organised, under the presidency of Professor A. Fournier, with the view of raising a monument to the memory of the late Dr. Philippe Ricord. Dr. Horteloup has been appointed secretary of the committee, to whom all subscriptions should be addressed, at 76, Rue de la Victoire, Paris.

The Theory of Medicine Chair.

The Council of the Faculty of Medicine of Paris has proposed first on the list of candidates the name of Dr. Debove for the chair of the Theory of Medicine, vacant by the recent death of Professor Damaschino.

The Hygiene of Infants.

The Paris Academy of Medicine has just opened to competition a prize of the value of 1000 francs for the best work on the hygiene of infants. The following is the question proposed: To determine what are, in the artificial feeding of infants, the value and the effects of raw milk, warmed, or boiled milk respectively. The papers, which should be written in French, the other academical rules being observed, are to be forwarded to the Academy before March 1st, 1891.

Paris, March 11th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Pre-frontal Region of the Brain.

MODERN physiologists regard the pre-frontal part of the brain as the seat of character and intellect. After the removal of this part in dogs and monkeys no paralysis of any muscles or loss of sensibility occurs, but singular changes in the behaviour, emotions, and character of the animals have been observed. They become livelier, restless, impatient, irritable, quarrelsome, and violent. Their movements seem purposeless, and their attention to what is going on around them and their intelligence are diminished. These observations have been confirmed by similar phenomena in the case of human beings. The well-known "Crowbar case" described by the American physician Dr. Harlow is one in point. A young man was busy stamping a bursting-charge into a rock with a pointed iron rod when the charge suddenly exploded and the rod entered his head under the angle of the lower jaw, came out in the frontal region, and was found some distance off, covered with blood and brain substance. He became childish, wilful, fickle, and restless, and suffered loss of intellectual power. Gradually, however, these symptoms disappeared; he recovered and lived for thirteen years. His skull is preserved in Harvard University. The *Post*, from which I take these particulars, relates a similar case which has been recently observed in a hospital at Zurich. An artisan went home drunk, and fell out of a window about 100 feet from the ground, probably in the attempt to shut it. He suffered a splinter fracture of both the frontal bones, with severe contusion of the brain in that region and efflux of brain substance. The man, who before his accident had been well-behaved, peaceable, good-natured, cheerful, and cleanly, became malicious, slanderous, quarrelsome, violent, and dirty, while no other morbid symptoms were observed.

Teaching the Laws of Health.

At the instance of the Berlin Society for Domestic Hygiene, Julius Springer of Berlin has published three cheap little cards, on which brief rules for the care of children in infancy, first help in case of accidents, and the steps to be taken in case of infectious diseases are printed. The Society intends gradually to get similar cards printed, on which the other important subjects of domestic hygiene are treated in the same clear, brief, and simple style, in order that the laws of health may be made known even to the leisureless classes.

The Tenth International Medical Congress.

A mixed municipal deputation, consisting of ten city deputies and five magistrates, is to deliberate in what form the municipal authorities shall show their respect to the International Medical Congress which is to meet here on Aug. 4th.

Sanatorium for Lung Patients.

At the last meeting of the Berlin Medical Society, Professor Virchow communicated a letter from the Society for Internal Medicine inviting the Medical Society to take part in a scheme for the erection of a sanatorium for lung patients near Berlin, and to send delegates to the committee. The Medical Society complied with this request, and appointed as delegates Professors Senator, Fuerbringer and B. Fraenkel.

Recent Publications.

"On the Formation of Public Sanatoria for Consumptive Patients," a lecture by Professor Finkelnburg; "On the Development of Public Hygiene," a speech by Professor Hirsch; "The Hygiene of Chastity," by Dr. Kornig; "Civilisation and Disease," by Dr. Reich; "Darwinism in its Relation to the Investigation of Nature, to Religion, and to Freemasonry," by Professor Settegast; and "In Memory of Richard von Volkmann," by Professor Krause.

Dr. Erwin von Esmarch.

Dr. Erwin von Esmarch, a son of Professor Esmarch of Kiel, has established himself as a private lecturer in the medical faculty of Berlin University. His inaugural lecture treated of the present state of the disinfection question. He is keeper of the Hygienic Museum here, and has already made his mark as a bacteriologist and hygienist.

Dr. Paul Niemeyer.

The popular medical writer, Dr. Paul Niemeyer, died here about a week ago. He was a member of a famous medical family (his elder brother Felix being the well-known Tübingen professor), and was born at Magdeburg in 1832. He studied in Berlin and Halle, and then practised in Magdeburg till 1875, in which year he made an unsuccessful attempt to make his way as a university teacher in Leipzig. He then came to Berlin, and has since busied himself as the leader of a hygienic society here, and in writing essays intended to convey useful knowledge to the people. His chief claim to remembrance in the history of medicine rests on his "Handbook of Percussion and Auscultation." His "Physical Diagnosis" and three volumes of "Medical Essays" are also of scientific value.

Dr. Richard Pfeiffer has been appointed First Assistant in the Hygienic Institute of Berlin University as successor to Dr. Karl Fraenkel, who was recently appointed professor at Königsberg. He has been assistant in the Hygienic Institute for two years past, and he has already gained a name by the "Photographic Atlas of Bacteriology" which he edits along with Dr. Fraenkel.

In consequence of Professor von Volkmann's death, Professors von Bergmann of Berlin, Erb of Heidelberg, and Winckel of Munich have undertaken to edit the "Collection of Clinical Lectures" founded by von Volkmann.

Berlin, March 11th.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5964 births and 4955 deaths were registered during the week ending March 8th. The annual rate of mortality in these towns, which had been 25·1 and 25·6 per 1000 in the preceding two weeks, further rose last week to 26·6; the rate was 22·3 in London and 30·2 in the twenty-seven provincial towns. During the first ten weeks of the current quarter the death-rate in the twenty-eight towns averaged 25·4 per 1000, and was 2·2 above the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 19·2 in Cardiff, 20·7 in Brighton, 21·9 in Nottingham, and 22·2 in Derby. The rates in the other towns ranged upwards to 38·8 in Blackburn, 39·4 in Wolverhampton, 40·1 in Bolton, and 45·6 in Manchester. The deaths referred to the principal zymotic diseases,

which had been 371 and 379 in the preceding two weeks, were last week 372; they included 170 from whooping-cough, 68 from measles, 52 from scarlet fever, 33 from diphtheria, 25 from "fever" (principally enteric), 24 from diarrhœa, and not one from small-pox. No death from any of these zymotic diseases was recorded during the week in Derby or in Leicester, while they caused the highest death-rates in Salford, Norwich, Bolton, and Sheffield. The greatest mortality from whooping-cough occurred in Sheffield, Salford, Bristol, and Bolton; from measles in Liverpool, Manchester, and Norwich; and from scarlet fever in Sunderland and Sheffield. No marked excess of "fever" mortality was recorded in any of these great towns. The 33 deaths from diphtheria in the twenty-eight towns included 19 in London, 2 in Liverpool, 2 in Bolton, 2 in Sheffield, and 2 in Newcastle-upon-Tyne. No death from small-pox was registered in any of the twenty-eight great towns. Four cases of this disease were under treatment on Saturday last in the Metropolitan Asylum Hospitals, and not one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum and London Fever Hospitals further fell last week to 1187; 53 cases were admitted to these hospitals during the week, against 89 and 88 in the previous two weeks. The deaths referred to diseases of the respiratory organs, which had increased from 439 to 492 in the preceding three weeks, further rose last week to 510, and exceeded the corrected average by 7. The causes of 105, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Wolverhampton, Leeds, and in three smaller towns; while the largest proportions of uncertified deaths were registered in Oldham, Sheffield, Liverpool, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 28·7 to 26·9 per 1000 in the preceding three weeks, further declined to 26·7 in the week ending March 8th; this rate almost corresponded with that which prevailed during the same week in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 20·3 in Perth and 21·3 in Paisley, to 28·5 in Leith, 29·4 in Glasgow, and 30·7 in Aberdeen. The 690 deaths in the eight towns showed a decline of 7 from the number in the previous week, and included 44 which were referred to whooping-cough, 29 to measles, 11 to diphtheria, 9 to diarrhœa, 7 to scarlet fever, 4 to "fever" (typhus, enteric, or ill-defined), and not one to small-pox. In all, 104 deaths resulted from these principal zymotic diseases, against 100 and 97 in the preceding two weeks. These 104 deaths were equal to an annual rate of 4·0 per 1000, which exceeded by 2·0 the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases last week were 4·5 in Glasgow and 6·6 in Leith. The fatal cases of whooping-cough, which had risen from 29 to 53 in the preceding three weeks, declined again to 44 last week, and included 17 in Glasgow, 9 in Dundee, 8 in Edinburgh, and 6 in Aberdeen. The 29 deaths from measles exceeded by 5 the number in the preceding week; 17 occurred in Glasgow, 8 in Edinburgh, and 3 in Leith. The fatal cases of diphtheria, which had been 11 and 6 in the preceding two weeks, rose again to 11 last week, and included 5 in Glasgow, 2 in Edinburgh, and 2 in Dundee. The 7 deaths referred to scarlet fever exceeded by 3 the number in the preceding week, and included 2 in Glasgow. The 4 fatal cases of "fever" corresponded with the number in the previous week, and included 2 in Paisley. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 205 and 201 in the preceding two weeks, further declined to 181 last week, but exceeded by 39 the number returned in the corresponding week of last year. The causes of 74, or more than 10 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined from 37·8 to 30·7 per 1000 in the preceding three weeks, further fell to 28·2 in the week ending March 8th. During the first ten weeks of the current quarter the death-rate in the city averaged 38·5 per 1000, the mean rate during the same period being 24·8 in London and 26·5 in Edinburgh. The 191 deaths in Dublin last week showed a further decline of 17 from the numbers in the preceding three weeks; they included 8 which were referred to whooping-cough, 5 to measles, 2 to "fever" (typhus, enteric, or ill-defined), 2 to diarrhœa, and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths from these principal zymotic diseases, which had risen from 12 to 21 in the preceding three weeks, declined again last week to 17; they were equal to an annual rate of 2·5 per 1000, the rate from the same diseases being 2·1 in London and 3·7 in Edinburgh. The fatal cases of whooping-cough, which had been 4 and 8 in the preceding two weeks, were again 8 last week; and the deaths from measles rose to 5, against 3 in each of the previous two weeks. The fatal cases of "fever," which had increased from 5 to 9 in the preceding three weeks, declined to 2 last week. Three inquest cases and 3 deaths from violence were registered; and 62, or nearly a third, of the deaths occurred in public institutions. The causes of 20, or more than 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL RESERVE OF OFFICERS.—The undermentioned Surgeons to be Surgeons-Major, ranking as Majors:—Henry Wright (dated Jan. 5th, 1890); Edmond West Symes, M.D. (dated Feb. 13th, 1890).—Surgeon Henry Hammond Smith, 1st Volunteer Battalion, South Staffordshire Regiment, to be Surgeon, ranking as Captain (dated March 12th, 1890).

VOLUNTEER CORPS.—*Artillery:* 3rd Lancashire: Acting Surgeon M. J. Fox to be Surgeon (dated March 8th, 1890).—*Rifle:* 5th Volunteer Battalion, the Cameronians (Scottish Rifles): Acting Surgeons D. Macphail, M.D. (dated March 8th, 1890), and J. Blair, M.D. (dated March 8th, 1890), to be Surgeons.

The Christian names of Surgeon Piggott should be Frederick Knollys, and not as stated in the *London Gazettes* of June 20th, 1884, and Sept. 27th, 1889.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council held on the 13th inst., the minutes of the ordinary meeting of Feb. 13th were read and confirmed.

The report of the Museum Committee was read, approved, and adopted.

The report from the Laboratories Committee, which had been already approved by the Royal College of Physicians, was read and adopted by the Council, and the committee thus authorised to expend a sum not exceeding £2000 on fittings, apparatus, and instruments. It was also agreed that the sum of £90 2s. be expended in minor work in connexion with the laboratory.

A letter of the 1st inst. from Dr. Liveing, Registrar, was read reporting the proceedings of the Royal College of Physicians in reference to the "University for London" question, and seeking a conference thereon with the Committee of the Royal College of Surgeons; and also reporting the adoption by the Royal College of Physicians of the following Reports—viz.: (1) the Report, dated Feb. 10th, 1890, of the Committee on the Extension of the Examination Hall Buildings; (2) the Report, dated Feb. 11th, 1890, of the Delegates appointed to confer on the action of the General Medical Council on the subject of the Registration of Diplomas in State Medicine; and (3) the Report, dated Feb. 21st, 1890, of the Laboratories Committee.

The delegates of the two Colleges meet at the Examination Hall to-day (Friday).

A letter of the 7th inst. and enclosed memorial, in reference to the experiments and proposals of Dr. Brown-Séquard, were read from the Secretary of the Protest Committee.

A letter of the 15th ult. from Dr. G. S. Woodhead was read, thanking the two Colleges for having appointed him Director of the Laboratories.

LONDON HOSPITAL.—A contract has been entered into for the construction of an extension to the building of this hospital, at a cost of £15,951.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, were, at an ordinary meeting of the Council on the 13th inst., admitted Members of the College:—

Bristow, Geo. Hamilton, L.S.A., St. George's-square, Belgravia.
Logan, Roderic R. W., L.S.A., Holmston, Harrow-road, Harlesden.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 26th ult. the following degrees were conferred:

Bachelors of Medicine and Bachelors of Surgery.—John H. Dewhurst, Arthur Edwin Ronald, Trinity; Henry Alexander Francis, John Alfred Wait, St. John's; George Herbert Staines Daniell, William Wilking Stabb, Gonville and Caius.
Bachelor of Surgery.—Jamieson Boyd Hurry, St. John's.

A GENEROUS GIFT.—It is stated that the late Mr. Michael Beveridge, who was Provost of Kirkcaldy, has left £50,000 for the purchase of a public park and library for that town.

TRING LOCAL BOARD.—The Board has just decided to appoint a veterinary surgeon as inspector, under the Dairies and Milkshops Act, to visit and inspect the dairies and cowsheds in the district.

NEWSVENDORS' BENEVOLENT AND PROVIDENT INSTITUTION.—The annual general business meeting of this Society will be held at the Memorial Hall Buildings, Farringdon-street, E.C., on the 18th inst. John Lobb, Esq., C.C., M.L.S.B., will preside.

INTERNATIONAL CONGRESS OF HYGIENE.—The Sanitary and Special Purposes Committee in connexion with this movement have recommended "that Captain Walter H. James, chairman of that committee, and Sir V. H B. Kennett-Barrington be appointed to serve on the General Committee for organising the holding of the International Congress of Hygiene and Demography to be held in London in 1891."

OBSTETRICAL SOCIETY OF LONDON.—The library of the Society will be closed throughout next week. Due notice will be given of the date at which it will be opened in the new premises, Hanover-square. The future meetings of the Obstetrical Society will be held, as already announced, in the Royal Medical and Chirurgical Society's rooms, 20, Hanover-square, the next meeting taking place on Wednesday, April 2nd.

SATISFACTORY RECORD.—We are pleased to record that the death-rate in Buckingham for 1889 was 14·5 per 1000, and we cordially congratulate the inhabitants of the town of Buckingham upon such a satisfactory death-rate, as well as the sanitary authority of the town upon their wise policy of expediting with as little delay as possible the carrying out of the schemes for the disposal of sewage and the establishment of a water-supply which have been devised by Mr. Baldwin Latham.

THE PROPOSED HOSPITAL FOR THE INSANE.—At the weekly meeting of the County Council, held on the 11th inst., under the presidency of Lord Rosebery, the Special Committee on a Hospital for the Insane submitted their recommendations with regard to an adequately equipped hospital for the study and curative treatment of insanity in pauper lunatics. An amendment to the effect that the consideration of the report be adjourned for six months, and that it be referred to the Asylums Committee for consideration and report, was carried by a large majority.

EARLSWOOD ASYLUM.—At the Hôtel Métropole, on Wednesday evening, the forty-third anniversary festival of the supporters of the Earlswood Asylum was held under the presidency of Mr. Alfred L. Cohen. In proposing the toast of the evening, "The Earlswood Asylum," the Chairman stated that it was an institution drawing its inmates from every part of the British Empire, and staffed by teachers who were miracles of patience. Earlswood was, indeed, a school of remarkable and rare excellence, and every trade was represented. The physically weak became physically strong, the idle became useful, the unclean became orderly and moral, and the religious tone of the brutish became elevated and exalted. He had no hesitation in appealing for such an institution. In response to the appeal, subscriptions &c. to the amount of £6536 were announced in the course of the evening, including an anonymous donation of £1000.

PRESENTATION.—A testimonial has been presented to Mr. J. T. Jackson of Highbury-grove, who is removing from the neighbourhood, where he has practised for wellnigh forty years. It was felt by many that the occasion of his leaving afforded them an opportunity to express their high esteem for him personally and their appreciation of his unfailing kindness and his attention and skill as a medical adviser. The testimonial is subscribed by a large number of patients and friends, and amounts to the sum of £1350. An illuminated album, containing a suitable address and the names of the subscribers, accompanies the gift. Mr. Jackson's departure from Highbury will be regretted by his professional brethren, who have always found in him a kind and honourable neighbour.

LONDON SANITARY PROTECTION ASSOCIATION.—Lord Chelmsford presided at the ninth annual general meeting of this Association on Saturday, the 22nd ult. The report of the Council showed that 512 members had joined during the year, the total now on the books being 1507; 511 houses inspected for the first time during the year had been found to be in a bad condition, the remainder being generally fairly good. The engineering staff had been considerably strengthened, and the treasurer's report showed an excess of receipts over expenditure of nearly £450. A reduced scale of charges for the smaller class of houses had recently been introduced, and it was proposed to amend the articles of association in certain particulars. The report was adopted. Mr. E. C. Robins suggested that the Council might petition Parliament in favour of the Bill to be brought in by Mr. Ritchie for consolidating the various Sanitary Acts, and might also make suggestions for improving it, especially in the direction of requiring competency on the part of sanitary officers.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.—The following officers, who have been under instruction from Surgeon Walter Pearce, M.D., and the staff of the School, have recently passed the proficiency examination for Volunteer medical officers, which is now compulsory for all acting surgeons of the Volunteer force, and is required before promotion as well as for commissions in the Army Medical Reserve. Fifteen candidates from this school presented themselves at the various regimental depôts. The names of those who passed are as follows:—Brigade Surgeon P. B. Giles, Surgeon-Major W. T. Colby, M.D., Surgeon W. Chalmers-Cowan, Surgeon A. G. Bateman, M.B., Surgeon W. H. Ball, F.R.C.S. Ed., Surgeon A. R. F. Evershed, Acting Surgeon J. A. Adams, M.D., Acting Surgeon M. J. Fox, Acting Surgeon W. Nettle, Acting Surgeon G. J. Eady, Acting Surgeon R. Pollok, M.B., Acting Surgeon D. Macphail, M.D., Acting Surgeon J. Adams, M.B., and Acting Surgeon H. G. Roberts. The next class will commence in May. The convenience of officers residing at a distance from London will be studied. Further information can be obtained of the honorary secretary, R. R. Sleman, 7, St. Benet-place, Gracechurch-street, E.C.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. Algernon Peckover of Wisbech has presented £1000 each to the Spalding Johnson Hospital and the North Cambridge Hospital at Wisbech, also £500 to the Hunstanton Convalescent Home, and £250 to the Peterborough Infirmary.—The Hon. A. G. Tollemache has sent a donation of £50 to the St. John's Hospital for Diseases of the Skin, Leicester-square, London.—The committee of the Manchester Southern and Maternity Hospital have received a donation of £500, under the initials "L. M. C.," towards the expenses of the hospital.—Admiral Grieve, of Ord House, Berwick, has given £50 to the Berwick Infirmary.—The London Leathersellers' Company has sent a donation of 20 guineas to the British Home for Incurables.—The late Mr. John Fleming, solicitor, Newcastle-on-Tyne, has bequeathed £25,000 to the Fleming Memorial Hospital for Sick Children (which he erected during his lifetime), to the Newcastle Infirmary £10,000, to the Prudhoe Convalescent Home at Whitley and the Village Home for Girls at the same place £2500 each, and to the Newcastle Dispensary £1500.—The late Mr. James Taylor of Starley Hall, Burntisland, has bequeathed £2000 to the Edinburgh Hospital for Sick Children, £3000 to Longmore's Hospital for Relief of Incurables, £2000 to the Royal Infirmary, £4000 to the Larbert Institution for Imbeciles, £1000 to Dr. Barnardo's London Homes for Destitute Children, and £2000 to the Leith Hospital and Humane Society.—The late Mr. William Thompson, architect, of Grantham, has bequeathed £250 to the Grantham Hospital.

CARLOW COUNTY INFIRMARY.—During the year 1889 there were 186 patients admitted and 800 out-patients treated. A number of patients (chiefly suffering from surgical and gynæcological diseases) from the adjacent counties of Kildare, Kilkenny, and Queen's County had sought and obtained admission for treatment as paying patients. The cash account showed a credit balance of £192 9*s.* 5*d.*

METROPOLITAN POLICE SURGEONS' ASSOCIATION.—A general meeting of the Association will be held in the library of St. Thomas's Hospital on Friday, March 21st, at 8 P.M., when a paper will be read by J. R. McIlraith, Esq., LL.B., M.A., entitled "The Present State of English Law with regard to Drunkenness and Inebriety." A discussion will afterwards be opened by Dr. Forsyth on the definition of the term "Drunk."

DEATH OF A PASTEUR PATIENT.—An inquest has been held near Coleraine on the body of a boy named Joseph Rankin, aged thirteen years, who was bitten by a rabid dog on Jan. 29th last, and had been treated by M. Pasteur. He returned home and did not exhibit any sign of illness until March 5th. He died on Monday last. It was stated that death resulted from hydrophobia, and a verdict to this effect was returned.

GENERAL HOSPITAL, BRISTOL.—The annual report for the past year records the uninterrupted and still increasing good work accomplished by the institution. The new wing, containing seven wards, with forty beds, is nearly completed; and the Nurses' Home, for the accommodation of thirty-six nurses, is finished. There had been a considerable increase during the year of both in-patients and out-patients. The ordinary income was maintained, but it still only reaches £7000, while the annual expenditure was £8000. Large legacies had been received, which have enabled the committee to invest £2789 9*s.* 3*d.*, and to reduce the debt due to the treasurer to £1229.

COTTAGE HOSPITALS.—*Braintree:* The report for 1889 was satisfactory, and showed a balance over expenditure of about £30.—*Keighley:* The number of patients during the past year, which were accident and surgical cases, was seventy-eight. After payment of the disbursements a credit balance remained of £210 5*s.* 4*d.*—*Maidenhead:* The report (the eleventh) states that during the past year eighty-seven patients were admitted, and the number of beds occupied was 3061. The cash account showed a small balance in hand.—*Surbiton:* During the past year 142 patients were admitted. The finances exhibited a small credit balance. The Jubilee endowment fund had been strengthened by a donation of £50, and the fund now amounted to £579 11*s.* 5*d.*, which was invested in Government stock.

MEDICAL NOTES IN PARLIAMENT.

Pupil Teachers and Vaccination.

ON Friday evening, March 7th, in the House of Commons, Mr. Picton asked the Vice-President of the Committee of Council on Education whether he could state by what law the Education Department was empowered to refuse recently to sanction the engagement by the Leicester School Board of two girls as pupil teachers, because, though otherwise qualified, they were unvaccinated; whether the Department was aware that vaccination was practically obsolete in the borough of Leicester; and whether the School Board was to be compelled to go outside the borough for its pupil teachers.—Sir W. Hart Dyke in reply said, "Every candidate for the office of pupil teacher is required by the Code to produce a medical certificate in a form prescribed by the Department. If that certificate, which has now been in use several years, since the spring of 1885, and has been approved by successive Administrations, does not show that the candidate has been successfully vaccinated, it is the practice of the Department to refuse to sanction the engagement, and I know of no reason why an exception should be made in favour of a particular town."

Typhoid Fever among British Troops in India.

In the House of Commons on Tuesday, the 11th inst., in reply to a question by Sir W. Foster, Mr. E. Stanhope said that typhoid or enteric fever had been very prevalent in India during the years 1887, 1888, and 1889, and was especially fatal last year. The deaths from this disease were 247 in the year 1887, 267 in the year 1888, and 429 last year, as to which year, however, the figures must be regarded as approximate only. The deaths had been most numerous among young soldiers. All possible precautions were taken to prevent the insanitary conditions which were believed to induce this disease. Cantonments and barracks, with the neighbouring towns and bazaars, were strictly supervised, and the purity of water, milk, and food generally secured by all practicable means. During the last year a Special Commission investigated the sanitary state of Lucknow and Meerut, with particular reference to enteric fever. The liability of young soldiers to this disease was a principal reason for not allowing men under twenty years of age to proceed to India.

BOOKS ETC. RECEIVED.

ALCAN, FELIX, Paris.
Les Insectes Vésicants. Par H. Beauregard. Avec 34 planches en lithographie hors texte et figures dans le texte. 1890. pp. 544.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
Electricity in General Practice. By W. Bolton Tomson, M.D. 1890. pp. 46.

BELL, GEO., & SONS, York-street, Covent-garden, London.
The New Spirit. By Havelock Ellis, L.S.A. 1890. pp. 250.

BLACK, ADAM & CHARLES, Edinburgh.
The Collected Writings of Thomas De Quincey. New and enlarged Edition. By D. Masson. Vol. V.: Biographies and Biographic Sketches. 1890. pp. 416.

BLACKIE & SON, Old Bailey, London.
Blackie's Modern Cyclopædia of Universal Information. With Pictorial Illustrations and a series of Maps. Edited by C. Annandale, M.A., LL.D. Vol. V. Ima—Mon. 1890. pp. 512.

CASSELL & Co., Limited, London.
English Sanitary Institutions, reviewed in their Course of Development and in some of their Political and Social Relations. By Sir John Simon, K.C.B. 1890. pp. 496.

DORAN, W. J., Philadelphia.
Transactions of the American Gynæcological Society. Vol. XIV. For the year 1889. pp. 480.
Transactions of the American Association of Obstetricians and Gynæcologists. Vol. XI. For the year 1889. pp. 397.

KIMPTON, R., 126, Wardour-street, London, W.
A Practical Manual of Venereal Diseases, including Disorders of Generation. By M. K. Hargreaves, M.D. Second Edition. 1890. pp. 202.

LEWIS, H. K., Gower-street, London.
Wanderings in Search of Health; or Medical and Meteorological Notes on various Foreign Health Resorts. By H. Coupland Taylor, M.D. With Illustrations. 1890. pp. 259.

NEW SYDENHAM SOCIETY, London.
Micro-Organisms, with special reference to the Etiology of the Infective Diseases. By Dr. C. Flügge. Translated by W. Watson Cheyne, M.B. With 144 Drawings. 1890. pp. 826.
Lectures on Children's Diseases. A Handbook for Practitioners and Students. By Dr. E. Henoch. Vol. II. Translated by J. Thomson, M.B., F.R.C.P. Edin.

RENSHAW, HENRY, 356, Strand, London.
Essentials of Forensic Medicine, Toxicology, and Hygiene. By C. E. A. Semple, M.R.C.P. Lond. With 130 Illustrations. 1890. pp. 196. Price 6*s.*

SWAN SONNENSCHEIN & Co., Paternoster-square, London
Browning's Message to his Time: his Religion, Philosophy, and Science. By Edward Berdoe, M.R.C.S. 1890. pp. 222.

YOUNG J. PENTLAND, Edinburgh and London
The National Medical Dictionary. By J. S. Billings, A.M., M.D., and others. Vol. I.: A. to J. Vol. II.: K. to Z. 1890. pp. 733 and 709.

The Natural History of Specific Diseases; by Edwd. F. Willoughby, M.D.Lond. (H. K. Lewis, London, 1890, price 2*s.* 6*d.*).—Notes on Medical Legislation in British Columbia; by Mark S. Wade, M.D., F.C.S.—The Twenty-ninth Annual Report of the Bourton-on-the-Water Cottage Hospital, 1889 (Clift and Ryland, Stow-on-the-Wold).—Fever, Thermotaxis, and Calorimetry of Malarial Fever; by Isaac Ott, M.D. (M. J. Rooney and Co., New York, 1889).—Curabilidad del Ictero Grave, Primitivo Tesis para el Doctorado presentada y Sostenida el 18 de Setiembre de 1888; por Emilio Martinez y Martinez (Alvarez y Compañía, Habana, 1888).—Sanitary Aids for House Hunters, what to look for and what to avoid; by H. W. Crosse (L. Upcott Gill, London, 1890, price 6*d.*).—Zur Kenntniss der Syphilitischen Erkrankungen des centralen Nervensystems; von Dr. H. Oppenheim; mit 4 Tafeln (A. Hirschwald, Berlin, 1890).—Egoism, Altruism, and Christian Eudaimonism; by the Rev. M. Kaufmann, M.A. (Religious Tract Society).—Johns Hopkins University, Baltimore: Studies from the Biological Laboratory; Vol. IV., No. 6 (N. Murray, Johns Hopkins University, February, 1890).—Index Medicus: Authors and Subjects; Vol. XII., No. 1, January, 1890 (Trübner & Co., and Lewis, London).—A Study of Doses: Essay 57; by Wm. Sharp, M.D., F.R.S. (George Bell & Sons, London, 1890).—La Chirurgie du Sinus Sphénoidal; par le Dr. Emile Berger (O. Doin, Paris, 1890).—Atlas von Beleuchtungsbildern des Trommelfells; von Dr. Kurd Burkner (Gustav Fischer, Jena, 1890).—Hydrophobia, its Cause and Prevention; by Frank Kerslake (Society for the Prevention of Hydrophobia, London, 1890, price 6*d.*).—Etudes de Clinique Infantile; par le Dr. Sevestre (E. Lecrosnier et Babé, Paris, 1889).—Contribution à l'Etude du Synchisis Etincelant; par Dr. Emile Gallemaerts: (A. Manceaux, Bruxelles).—Mikrophotographischer Atlas der Bakterienkunde; von Dr. Carl Fraenkel und Dr. Richd. Pfeiffer (August Hirschwald, Berlin, 1890).—Ueber das reiskörperchenhaltige Hygrom der Sehnenscheiden; von Dr. Edwin E. Goldmann (aus der Chirurgischen Klinik zu Freiburg).—The Sea Route to Siberia, followed by a brief account of the Natural Resources of the Country; by Geo. G. Butler, M.A., F.R.G.S., and Francis P. Fletcher-Vane (Morris and Porteous, London).—Persistent Headaches, and how to cure them; by Julian J. Chisolm, M.D. (Guggenheimer, Weil, & Co., Baltimore).—Two Women or One? From the MSS. of Dr. Leonard Benary; by Henry Harland (Cassell & Company, London, 1890, price 1*s.*).—Die letzte Stiftung der Kaiserin Augusta; von Ernst von Bergmann (August Hirschwald, Berlin, 1890).—The Country Roads of England; by Urban Smith, A.M.I.C.E., January, 1890 (Stephen Austin & Sons, Hertford).—Magazines for March: The Century, Illustrated Monthly Magazine, The Woman's World, Good Words, Sunday Magazine (Isbister), Lippincotts', Wit and Wisdom, Springtide, Sunday at Home, Antiquary, Scribner's Magazine, Field Club, Gardener's Magazine Babyhood, Girl's Own Paper, Boy's Own Paper, Scottish Geographical Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABBOTT, C. E., L.K.Q.C.P.I., M.R.C.S., has been reappointed Medical Officer of Health for the Braintree Urban and Rural Sanitary Districts.

BATE, R. F., M.R.C.S., L.R.C.P., has been appointed House Physician to the Charing-cross Hospital, London.

BENNET, C. J., M.R.C.S., has been reappointed Medical Officer for Chapel-en-le-Frith Union and Fairfield Local Board.

BLAKISTON, A. A., M.R.C.S., L.S.A., has been reappointed Medical Officer for Glastonbury Borough.

BURMAN, W. M., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Wath Union District.

CLEGG, WALTER, M.R.C.S., L.S.A., has been reappointed Medical Officer for the Boston Rural and Union Districts and Port.

DEANE, S. R., L.R.C.S. Irel., L.A.H. Dub., has been appointed Medical Officer for the Eighth District of the Lincoln Union, vice Lowe.

DE'ATH, GEORGE H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Buckingham Rural and Union Districts.

DYKE, T. J., F.R.C.S. Eng., has been reappointed Medical Officer for the Merthyr-Tydvil Union and Rural Districts.

FARMER, F. R., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Fisherton House Asylum, Salisbury, vice Price.

FISK, WILLIAM J., L.D.S.E., has been appointed House Surgeon to the National Dental Hospital, London.

GOODALL, E., M.D. Lond., B.S., M.R.C.P., has been appointed Pathologist to the West Riding Asylum, Wakefield.

GOODALL, J. K., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer for the Whittington Union District.

GORMAN, THOMAS, M.B., B.Ch. Roy. Univ. Irel., has been appointed Assistant Surgeon to the Liverpool Dispensaries.

GREEN, ARTHUR, M.B., M.R.C.S., has been appointed Medical Officer for the East District of the Gateshead Union, vice Chas. Green, M.D., deceased.

KING, H. W., M.D. Edin., M.B., M.R.C.S., has been appointed Honorary Physician to the Chester General Infirmary.

MANLEY, J. H. H., M.B. Cantab., M.R.C.S., has been appointed Medical Officer for the Borough (County) of West Bromwich, Staffordshire.

MATHESON, FARQUHAR, M.B.C.M. Aberd., has been appointed Medical Officer for the Eastern District of the Westminster Union, vice Sandwell, deceased.

MORRIS, ALBERT, L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Medical Officer for the Southend Urban Sanitary District of the Rochford Union.

NELL, R. F., M.R.C.S., L.S.A., has been reappointed Medical Officer for the Penarth District of the Cardiff Union.

PARHAM, H. C. H., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Charing-cross Hospital, London.

PARTRIDGE, THOS., M.K.Q.C.P. Irel., M.R.C.S., has been reappointed Medical Officer for Stroud.

RIVERS, W. H. R., M.D. Lond., M.R.C.S., has been appointed Junior House Physician to the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury.

SEQUEIRA, H. J., M.R.C.S., L.S.A., has been reappointed Medical Officer for the Third District of the City of London Union.

SMITH, W. R., M.D., M.B. Edin., has been appointed Medical Officer to the School Board, London.

STEEL, W. D., M.D. Aberd., M.B. and C.M., has been reappointed Medical Officer to the Abergavenny Union District.

TAYLOR, JAMES, M.B., M.S. Edin., has been appointed Senior House Physician to the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury.

THOMAS, A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Cottage Homes, West Derby Union.

THOMPSON, T. W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for East Barnet.

THOMPSON, W. H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Quarry Bank Urban Sanitary District of the Stourbridge Union.

WEBB, C. F., F.R.C.S. Edin., M.R.C.S., has been reappointed Medical Officer for the Basingstoke Union.

WELCH, J. B., M.B. Lond., M.R.C.S., has been reappointed Medical Officer for the Handsworth Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

COLONIAL OFFICE, Downing-street, S.W.—Government Analyst and Professor of Chemistry, Trinidad. Salary £600 per annum.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary, but residence, board, and washing provided.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House Surgeon. Salary £60.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Resident Medical Officer. Salary £50 a year, with board and rooms.

INFIRMARY FOR CHILDREN, Liverpool.—Assistant House Surgeon for six months. Board and lodging provided, but no salary.

KENSINGTON DISPENSARY.—Honorary Medical Officer. (Apply to Hon. Sec., F. Leach, Esq., 7, Stanford-road, Kensington-court.)

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the South-Eastern Fever Hospital, New-cross-road, S.E. Salary £15 per month, with board, furnished apartments, and washing. (Apply at the Offices, Norfolk House, Norfolk-street, W.C.)

RADCLIFFE INFIRMARY, Oxford.—House Physician. Salary £80, with board, lodging, and washing.

ROYAL BERKS HOSPITAL.—Assistant House Surgeon. Salary £40 per annum, with board and lodging.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, London.—Registrar and Chloroformist.

RYE UNION RURAL SANITARY AUTHORITY.—Medical Officer of Health. Salary £60 per annum, which will include travelling expenses.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Residence, board, and washing provided.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta-street, Covent-garden.—House Surgeon for six months. Honorarium 25 guineas, board, lodging, and washing.

WALLASEY DISPENSARY.—Assistant or Junior House Surgeon. Salary £80 per annum, with furnished apartments, coal, gas, and attendance.

WEST LONDON HOSPITAL, Hammersmith.—Surgeon-Dentist.

WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £80 per annum.

Births, Marriages, and Deaths.

BIRTHS.

BEDDOW.—On March 8th, at Rectory-road, Stoke Newington, the wife of J. Beddow, M.R.C.S., of a son.

BERTON.—On March 4th, at Canonbury-square, the wife of Denny Berton, M.B., C.M., of a son.

CUFFE.—On Feb. 8th, at Mount Vernon, Darjeeling, India, the wife of Brigade Surgeon C. M'D. Cuffe, C.B., Medical Staff, of a daughter (stillborn).

FOX.—On March 4th, at Tregea House, Penzance, the wife of John Alfred Fox, L.R.C.P. Lond., L.R.C.P. Edin., &c., of a daughter (Dorothy).

JACKSON.—On March 2nd, the wife of John Lowthian Jackson, M.B., C.M., Hedon-in-Holderness, Yorkshire, of a son.

JONES.—On March 9th, at River House, Enfield, the wife of Dr. Philip H. Jones, of a daughter.

PRATT.—On March 6th, at London-road, Leicester, the wife of Dr. Reginald Pratt, of a son.

SMYTH.—On March 5th, at Castleacre, Adelaide-road, Brockley, S.E., the wife of Francis Sydney Smyth, L.R.C.P., F.R.C.S., of a son.

STOCKS.—On March 5th, at Courland, Wandsworth-road, Clapham, S.W., the wife of Frederick Stocks, M.R.C.S., of a son.

WARWICK.—On March 10th, at Halesworth, Suffolk, the wife of Percy Warwick, surgeon, of a son.

MARRIAGES.

PARKINSON—WILSON.—On March 11th, at the Parish Church, Bradford, by the Rev. Canon Bardsley, assisted by the Rev. G. L. James, Vicar of Girlington, William Joseph Parkinson, M.R.C.S. (Eng.), eldest son of the late William Parkinson, surgeon, Bradford, to Emily Annie Wilson, daughter of the late John Wilson, of Manchester.

SEQUEIRA—SADLER.—On March 4th, at St. Michael's Church, Wandsworth-common, Henry James Sequeira, M.R.C.S., L.S.A., of Jewry-street, E.C., and Ingleside, Leytonstone, to Ella Mary, second daughter of the late Geo. Sadler, Esq., of Branksome, Wandsworth-common.

DEATHS.

AINSWORTH.—On March 6th, at Cliff Point, Lower Broughton, Manchester, Ralph Fawsett Ainsworth, M.D., aged 79.

ATKINSON.—On March 10th, at the residence of his son-in-law, Aldershot, James Atkinson, M.D., formerly of West Hartlepool, aged 60.

CASS.—On March 11th, at Carlisle-terrace, Goole, Yorkshire, Wm. Eden Cass, M.R.C.S., aged 89.

COLEBROOK.—On Feb. 25th, at Bath, Henry Colebrook, F.R.C.S., aged 84.

GRAMSHAW.—On Feb. 28th, at West Brighton, Sussex, Henry Gramshaw, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., late of Blenheim House, Kew, aged 62.

O'NEILL.—On March 9th, at Yew Tree, Tabley, Cheshire, Dr. S. L. O'Neill, of Wisbech, aged 39.

OTTLEY.—On March 5th, at Attercliffe, Sheffield, Michael A. Ottley, L.K.Q.C.P. Irel., M.R.C.S., aged 29.

POLAND.—On Feb. 28th, lost in the wreck of the *Quetta*, James Harry Poland (surgeon), eldest son of the late Alfred Poland, of Guy's Hospital, aged 35.

POPE.—On March 4th, suddenly, at Cleobury Mortimer, Shropshire, Dr. Pope, of Wolverhampton, aged 68.

POWELL.—On March 6th, at Lancaster Villa, Weybridge, John James Powell, M.R.C.S., aged 83.

PRIESTLEY.—On March 7th, at Attercliffe, Sheffield, Percy Priestley, M.R.C.S., aged 28.

RAYNER.—On March 11th, at Wellington House, Stockport, Thomas Vernon Rayner, surgeon, aged 51.

ROBERTS.—On March 9th, at Ballymeanoch, Lochgilphead, N.B., Francis Law Roberts, L.K.Q.C.P.I., M.R.C.S., aged 54.

STEWART.—On March 6th, at Camden-road, N.W., suddenly, Alexander Young Stewart, F.C.S., F.I.S., F.I.C., M.R.I., aged 48.

TURNER.—On March 8th, at High Wycombe, John Turner, J.P., F.R.C.S., aged 88.

WILLIS.—On March 3rd, in London, in his twenty-fifth year, Randolph Owen Willis, M.B., youngest son of George Willis, M.D., of Monmouth.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, March 17.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.
THE THROAT HOSPITAL (Golden-square, W.).—5.30 P.M. Dr. R. Norris Wolfenden: Nervous Disorders of the Throat.
SOCIETY OF ARTS.—8 P.M. Prof. A. H. Church: Some Considerations concerning Colour and Colouring. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. William Rose: (1) Case after Colotomy; (2) Case of Ligature of the Carotid for Aneurysm.—Dr. de Havilland Hall: Case of unusual Aortic Diastolic Murmur.—Dr. Sidney Phillips: Case of Aortic Disease presenting unusual features.—Mr. D. H. Goodsall: Two cases of Horse-shoe Fistula cured without division of Sphincters.—Dr. Beevor: Case of Athetosis after Injury affecting the Face.—Mr. Keetley: Two cases of Hip Excision presenting points of special interest.—Dr. Colcott Fox: Case of Stenosis of the Lower Part of the Pharynx from Hereditary Syphilis.—Mr. Ballance: Hemihypertrophy of the Head and Hypertrophy of certain Toes.—Dr. Acland: Case of Symmetrical Trophic Lesion of the Nails.—Mr. Bruce Clarke: Result of Plastic Operations on the Face after removal of Anthrax.—Mr. Hurry Fenwick: Cystoscopic View of a Saccule in the Bladder. And other cases by Mr. Paget, Dr. Montague Murray, &c.

Tuesday, March 18.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. G. J. Romanes: The Post-Darwinian Period.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Newton Pitt: Cerebral Lesions. (Gulstonian Lecture.)
ROYAL STATISTICAL SOCIETY (Royal School of Mines, Jermyn-st., S.W.).—7.45 P.M. Dr. William Ogle: On Marriage-rates and Marriage-ages, with Special Reference to the Growth of Population.
SOCIETY OF ARTS.—5 P.M. Mr. James Wells: Brazil.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Samuel West: Bronchial Casts from Bronchitis Crouposa.—Mr. A. Bowlby: Three cases of Coccygeal Tumours, two in Living Patients.—Mr. Jonathan Hutchinson, jun.: Paget's Disease of Nipple, with Psorospermiæ.—Mr. Bland Sutton: Half Vertebra in a Rabbit.—Mr. Stephen Paget: Two cases of Imperforate Rectum.—Mr. Hurry Fenwick: Spontaneous Fracture of Urinary Calculus.—Dr. W. J. Collins: Cancer of Œsophagus invading Trachea. Card Specimens by Messrs. S. Paget, G. R. Turner, and J. W. Targett.

Wednesday, March 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.
THE THROAT HOSPITAL (Golden-square, W.).—5.30 P.M. Dr. Greville MacDonald: Syphilis of the Throat and Nose.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. A. D. Michael: On the Variations of the Female Reproductive Organs, especially the Vestibule, in different species of Uropoda.
SOCIETY OF ARTS.—8 P.M. Mr. J. S. Keltie: Commercial Geography.

Thursday, March 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.
ROYAL INSTITUTION.—3 P.M. Mr. F. Niecks: The Early Developments of the Forms of Instrumental Music. (With Musical Illustrations.)
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA-PARK, E.—4.30 P.M. Sir Hugh Beevor: The Use of Remedies Applied Externally in Chest Diseases.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Hughlings Jackson: Convulsive Seizures. (Lumleian Lecture.)
HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. Savage: On the Warnings of General Paralysis in the Insane. Drs. Broadbent and Hughlings Jackson will take part in the discussion.

Friday, March 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE CANCER HOSPITAL (FREE), FULHAM-ROAD, BROMPTON, S.W.—4 P.M. Mr. Elam: Cancer of the Uterus.
ROYAL INSTITUTION.—9 P.M. Prof. G. F. Fitzgerald: Electro-magnetic Radiation.

Saturday, March 22.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Electricity and Magnetism
SOCIETY OF ARTS.—3 P.M. Prof. Vivian Lewes: The Atmosphere.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 13th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 7	29·80	S.W.	46	44	70	55	42	·01	Bright
,, 8	29·60	S.W.	47	46	65	53	45	·03	Raining
,, 9	29·81	N.W.	42	37	72	44	37	·09	Cloudy
,, 10	30·26	S.W.	41	40	55	53	33	·07	Raining
,, 11	30·26	W.	51	48	73	58	41	·18	Cloudy
,, 12	30·37	W.	46	45	97	61	43	..	Overcast
,, 13	30·07	W.	46	44	..	49	43	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

QUACK ADVERTISEMENTS IN NEWSPAPERS.

A CORRESPONDENT sends us various cuttings from the advertisement sheets of almanacks, papers, &c., in which the quack advertisements, and announcements by authors who would not like to be called "quack," are marked. He is very much shocked, and we share his feeling. We know of no power to restrain this evil, save in cases where indecent and immoral suggestions occur. There are only two sources of consolation. One is that with increased education vulgar advertisements of "cure-alls" will have less effect. Secondly, that the very rage and rampancy of pretension in advertisement are rapidly making it ridiculous. The great remedy in the hands of those who would perpetuate the traditional modesty and reticence of the profession is a severe discouragement of all quack methods, however subtle or refined.

Vaccination.—1. There is no regulation requiring the child to be vaccinated before going on board ship.—2. No useful opinion can be expressed in the absence of the child.

Mr. W. Scott Lang.—The paper will appear in an early number.

"EXCISION FOR PROLAPSE OF RECTUM."

To the Editors of THE LANCET.

SIRS,—An anonymous letter, under the above heading, appears in THE LANCET of March 8th, and in it the following paragraph occurs: "Mr. Treves' second case has recently applied at the hospital, complaining of incontinence of faeces and local and lumbar pain; and on examination a long stricture, which admits the oiled index with difficulty and pain, is too easily manifest, and there are two or three smaller annular constrictions in its course." I was a little shocked at discovering the name of the author of this letter and that of the hospital to which he alludes. The patient is the woman whose case I have described in THE LANCET of March 1st. This patient I recently examined in my wards in the presence of my class, with the following result. She states that she is better now than she was before the operation, but she had complete control over her sphincter

when she left the hospital, that some incontinence of fæces developed when she began to move about, and that she can always retain her motions for two hours. There is no trace of a prolapse. The anus is in the same condition in which it was when I last saw the patient (on Nov. 14th, 1889). There is some cicatrised tissue about it, which I had ascribed to the fact that before she came under my care she had been subjected to two operations with the cautery, or at least by "burning." The anus admitted one finger with perfect ease, and two fingers without pressure or dilatation, and without exciting any expression of pain. The "long stricture" I could not discover, nor would such a formation come within the area of my operation. The anonymous "Hospital Surgeon" discusses the question of stricture following excisions of the rectum for malignant disease. With this question I have no concern. In the case of the present patient I merely removed the protruding and pendulous mucous membrane. I am not aware that her rectum has been at any time excised. Upon theoretical grounds I am unable to perceive how the production of a "long stricture" can follow division of the mucous membrane without the anal margin. I might be excused for expressing the belief that the circumstances under which the anonymous letter was written were at least unhappy. I am, Sirs, yours truly,

Wimpole-street, W., March, 1890. FREDERICK TREVES.

P.S.—The patient is about to be readmitted into the hospital, and I should be pleased to show the case to any surgeon who may be interested in the matter.

Mr. W. H. Bull.—1. Our correspondent cannot do better than obtain a supply of calf lymph from the National Vaccine Establishment, Local Government Board, Whitehall, London, S.W.—2. If it is proposed to vaccinate a calf, calf lymph should be used, and not lymph taken from a child; and the lymph should be taken from the calf on the sixth day—i.e., after 5 × 24 hours.

M. Redmond.—Sitting with the back to the light is certainly preferable to the opposite position.

Medicus.—We confess we fail to grasp the purport of our correspondent's letter.

VACCINATION GRANTS.

To the Editors of THE LANCET.

SIRS,—As a public vaccinator I have a grievance which I hope you will allow me to ventilate in your columns.

Owing to some dispute between the Local Government Board and one of the County Councils, the former authority have not issued the usual certificates for the awards to public vaccinators; and as it appears the Board will not do so until the dispute in question has been settled by the law courts, I sadly fear that unless we bestir ourselves we shall be deprived of our award for an indefinite period. I should like to ask what interpretation you would put on the first clause of the 24th Section of the Local Government Act of 1888, which runs as follows: "So much of any enactment as requires or authorises payment out of the exchequer of any local grant in substitution for which the County Council is required by this Act to make any payment is hereby repealed as from the 31st day of March next after the passing of this Act *without prejudice to any right accrued before that day.*" My contention is that the Government are responsible for such portions of the grant as were earned before March 31st, 1889, and the County Council for the portions earned after that day. In my case the Government should pay $\frac{3}{4}$-ths of the grant, and the County Council the remaining $\frac{1}{4}$-ths of the same. I have written to one of our medical M.P.'s, begging him to ask a question on the subject in the House of Commons. If the answer does not prove satisfactory, I think public vaccinators should unite together, and bring the matter before the President of the Local Government Board. I am, Sirs, yours faithfully,

March, 1890. A PUBLIC VACCINATOR.

THE TORONTO M.D. DEGREE.

To the Editors of THE LANCET.

SIRS,—In reference to the answer to your correspondent, "F. A. B.," in THE LANCET of to-day, allow me to say that the University of Trinity College, Toronto, grants the degree of M.D. after examination, and without residence, to registered British practitioners of five years' standing. The Rev. Dr. Kendall of Southsea is the representative for England of the above university.—I am, Sirs, yours truly,

March 8th, 1890. W. A. H. BARRETT.

Nursing Sister.—Cullingworth's Manual of Nursing, Medical and Surgical; J. W. Anderson's Lectures on Medical Nursing; W. R. Smith's Lectures on Nursing.

Mr. J. A. C. Morrison.—The office of the Crown Agents for the Colonies, Downing-street, or the Emigrants' Information Office, 31, Broadway, Westminster.

THE MOON FUND.

To the Editors of THE LANCET.

SIRS,—Kindly insert the following further subscriptions to the above fund in your next issue. The list will close on March 31st.

G. G. Bothwell, L.R.C.P., £2 2s.; W. Nicholson, M.D., £1 1s.; S. L. Dobie, L.R.C.P. (Secunderabad, India), £1 1s.

I am, Sirs, yours truly,

PETER HORROCKS, M.D.,

26, St. Thomas's-street, S.E., March 10th, 1890. Hon. Treasurer.

FATAL POISONING BY CARBOLIC ACID.

To the Editors of THE LANCET.

SIRS,—In a note on "Two Cases of Fatal Poisoning by Carbolic Acid," by Dr. J. H. Davies, which appears in your issue of the 8th inst., the concluding paragraph states that "the schedule to the Pharmacy Act still excludes this potent and deadly poison from its official list, in spite of remonstrances; and until this state of things is remedied we can only expect to meet with more and more fatalities of a kindred nature to this." It appears to me probable that without some explanation the majority of your readers would naturally infer from this sentence that the Pharmaceutical Council, in whom the power of procedure under the Pharmacy Act is vested, should be held responsible for the omission of carbolic acid from the poison schedule of that Act. By the Pharmacy Act, 1868, it is enacted: "The Council of the Pharmaceutical Society of Great Britain may from time to time by resolution declare that any article in such resolution named ought to be deemed a poison within the meaning of the Act, and thereupon the said Society shall submit the same for the approval of the Privy Council; and that if such approval shall be given, then such resolution and approval shall be advertised in the *London Gazette*, and on the expiration of one month from such advertisement the article named in such resolution shall be deemed to be a poison within the meaning of that Act." The Council of the Pharmaceutical Society has upon two occasions, by resolution in Council, declared that carbolic acid ought to be deemed a poison within the meaning of the Pharmacy Acts. The resolutions have been submitted to the Privy Council for approval; but upon each occasion the approval has been withheld, and the resolution consequently nullified, so that the responsibility of omission rests entirely upon the Privy Council.

Meanwhile, carbolic acid is freely sold by traders who can have but little idea of its potency, and by them supplied in any kind of vessel which the whim or convenience of the purchaser may suggest, a ginger-beer bottle, spirit jar, or jam pot being favourite vehicles. No label is necessary, and, except when retailed by chemists, a caution or an indication of danger is the exception rather than the rule. There is therefore little wonder that your contributor points with some alarm to the probability of more and more fatalities whilst there is a free and unrestricted sale of "potent and deadly poison."

I am, Sirs, faithfully yours,

Kilburn, N.W., March, 1890. CHARLES B. ALLEN.

Infection.—Some local Acts contain a special provision that secondary cases occurring in the same house within, say, a month of one already notified need not be notified, and hence need not be paid for. But one of the intentions of the Infectious Disease (Notification) Act, 1889, is to secure a true return of the amount of infectious disease in a district. And it is quite clear from the terms "the patient" in Section 3 (1) (b) and "the case" in Section 4 (2) that each case is to be notified separately and paid for.

A. E. J. has forgotten to enclose his card.

"PAY OF MEDICAL OFFICERS."

To the Editors of THE LANCET.

SIRS,—Your correspondent, "Juvenile Labourer," in your issue of March 1st, hits a real grievance on the head. There is no question that from want of coördination and *esprit de corps* we do a vast amount of work gratuitously that ought to be paid for. Take the ambulance work, for instance. What other profession would give a free hand to teach a body of ignorant outsiders the technicalities of their art? "But it is for the sake of humanity," says one. Well and good; so it may be. But would a lawyer instruct in drawing up wills or conveyancing without a fee, or an architect in designing houses? I guess not. I have the misfortune to live in the neighbourhood of a nobleman's castle. I used to attend his family and servants. About two years ago I was indirectly solicited to form an ambulance class for men and women, with a course of lectures and drill, necessitating a journey of four miles twice a week for five weeks in the dead of winter, and at a late hour of the evening, each attendance to last an hour and a half. Just then I was heavily worked and in rather weak health. I declined, but offered to undertake the task later on, when the work was lighter. My proposal was not acceptable, and before long I received my *congé* at the castle. Since then, however, I formed an ambulance class in a neighbouring village, and have repeatedly practised and inspected the classes above alluded to; but all this work has been done gratuitously. Now I am asked to examine the classes of three villages, including all above mentioned; but, on making inquiry as to a fee for doing so, am told there are no funds for paying any fee. In other words, I am expected to drive some miles from home late in the evening, in order to put a lot of rustics through their performances, elicit their ignorance on practical surgery and anatomy, and sign their qualifications, absolutely for nothing. Comment is needless. I am, Sirs, your obedient servant,

March 3rd, 1890. AN OLD LABOURER.

Mr. F. R. W. Smith.—We are unaware of any facts in support of our correspondent's notion that the milk from cows fed as he describes can produce disease in the consumers; but, with him, we would strongly deprecate such methods of cattle feeding as he mentions.

Studens.—THE LANCET, Nov. 20th, 1886

PROVIDENT DISPENSARY REPORTS.

DR. RENTOUL, Hartington-road, Liverpool, asks us to state that he will feel obliged if readers would forward to him the last issued annual reports of those provident dispensaries with which they are connected, or of which they know.

P. W. R.—Our correspondent should put the question to the medical man whose conduct he seems to disapprove. He will understand that our columns are not open for the discussion of professional conduct by those outside the profession. The point he raises is a reasonable and important one; but we could not answer it without knowing much more than he tells us in his communication.

Mr. Tiernan.—We are very glad that the question has been so referred, and shall be pleased to hear the result.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bland Sutton, London; Dr. Herman, London; Dr. Yarrow; Dr. Hughlings Jackson, London; Sir Henry Thompson, London; Dr. Macnaughton Jones, London; Mr. F. Treves, London; Dr. S. West; Mr. Stanmore Bishop; Manchester; Prof. Walley, Edinburgh; Dr. Jacoby, New York; Mr. John Adams, London; Dr. R. Saundby, Birmingham; Dr. Richardson, London; Mr. A. W. Soffi, Lahore; Messrs. Back and Co., London; Dr. Bernard, Londonderry; Mr. C. B. Allen; Dr. Ward Cousins, Southsea; Mr. A. E. Watson, Torquay; Messrs. Hopkinson and Co., Nottingham; Mr. A. Duke, Dublin; Messrs. Evans, Sons, and Co., Liverpool; Rev. F. Lawrence, York; Mr. C. E. Abbott; Mr. D'Arcy Power, London; Dr. Woodman, Maida-vale; Messrs. Rowntree and Co., York; Dr. MacDermott, Newry; Mr. J. Reed; Messrs. Tucker and Co., Paddington; Dr. Goldmann, Freiburg; Messrs. Squire and Sons, London; Dr. Rogman, Belgium; Mr. Tasker; Messrs. Bailey and Son, London; Mr. Knowles, Salford; Mr. Horne, Stoke-on-Trent; Mr. Barrett, London; Mr. Longman, Salisbury; Mr. Parsons, London; Dr. Robinson, Dublin; Mr. Hall, Hertford; Dr. Dadabhai, Mandoi; Mr. Frost, London; Mr. Nash, Plymouth; Mr. Masson, Paris; Dr. R. Vicars, Lincoln; Dr. Chaple, Bow; Mr. H. Tromsdorff, Germany; Mr. Brend, Kensington; Dr. Veer, Albany, N.Y.; Mr. A. Pavone, Naples; Mr. J. B. Browne, London; Mr. Jebb-Scott, Liverpool; Mr. Birchall, Liverpool; Mr. Peacock, Hull; Mr. J. W. Taylor, Birmingham; Dr. A. H. Robinson, London; Messrs. Clarke, Son, and Platt, London; Mr. Ford, Southsea; Dr. Dorta, London; Mr. Alban Doran, London; Dr. J. More, Rothwell; Dr. Macnaughton, Walker-on-Tyne; Dr. Horrocks, London; Dr. Althaus, London; Mr. Haslam, Birmingham; Dr. O'Neill, Lincoln; Dr. Warner, London; Mr. F. W. Smith, New-cross; Dr. Stuffler, Pavia; Dr. Auld, Glasgow; Dr. Wynn Westcott, London; Dr. Karkeek, Torquay; Dr. M. Allen Starr, New York; Mr. W. W. Jones, London; Mr. Sleman, London; Dr. Colcott Fox, London; Mr. F. C. Clayton, Birmingham; Messrs. Ridges and Sons, Wolverhampton; Mr. Sutherland, Edinburgh; Messrs. Harrison and Brass, Elgin; Mr. Bishop, Manchester; Messrs. Crossley and Co., Buxton; Mr. L. Knaggs, Leeds; Dr. Flux; Mr. Crosby, South Shields; Dr. Mallins, Watton; Mr. Sell, London; Messrs. Hertz and Collingwood, London; Mr. Lumsden, Gateshead; Messrs. Wright and Co., Bristol; Mr. Hornibrook, London; Messrs. Mottershead and Co., Manchester; Mr. Roberts, Uxbridge; Messrs. Robertson and Scott, Manchester; Mr. Price, Walthamstow; Messrs. Reynolds and Branson, Leeds; Mr. Roe, Bow; Mr. Light, London; Messrs. Davies and Co., London; Mr. Eccles, Bloomsbury; Mr. Mountain, Great Grimsby; Mr. Wilkes, London; Mr. Shera, Harrogate; Mr. Scott, Manchester; Mr. Gemmell, Edinburgh; Matron, Stafford Infirmary; P. W. R.; A. F., Peckham; Aurophone, London; Anti-humbug; Clerk of the Guardians, Harrow-road; Liquor Carnis Co., London; Nursing Sister; Secretary, General Infirmary, Leeds; Secretary, Wrexham Infirmary; Secretary, General Hospital, Notts; Secretary, Wigan Infirmary; Secretary, General Hospital, Birmingham; Master in Surgery, London; Wasdale, London; J. M. E.; Secretary, Radcliffe Infirmary, Oxford; A Public Vaccinator.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Tully, Hastings; Mr. Cropley, Folkingham; Dr. Corley, Dublin; Mr. Adams, Rye; Mr. Watt, London; Mr. Whisher, Glamorgan; Messrs. Barff and Wire, London; Mr. Bromilow, jun., Bolton; Messrs. Wheatley and Co., Huddersfield; Mr. O'Connell, co. Limerick; Messrs. Beal and Sons, Brighton; Mr. Peddie, Staffordshire; Mr. Wrigley, Great Yarmouth; Dr. Windle, Halifax; Rev. A. Tooth; Dr. Gibbes, Ann Arbor; Mr. Evans, Radnor; Mr. Wallace, Lambeth; Messrs. Krohne and Seseman, London; Mr. Randolph, Taunton; Dr. Cheesman, Cape Colony; Rev. A. Cleveland, Selby; Dr. Pratt, Leicester; Dr. Hunter Mackenzie, Edinburgh; Rev. Dr. James, Winslow; Dr. Clark, Orange Free State; Mr. Hastings, Sidmouth; Mr. Tyte, Minchinhampton; Mr. Heim, London; Dr. Scott, Liverpool; Mr. Paulson, Loughboro'; Mr. Pinch, Bath; Miss Garleck, Leeds; Dr. Day, London; Mr. Cane, Lancashire; Mr. Vachell, Newport; Dr. Mason, Hull; Mr. Burgess, Sutton; Mr. Bryden, Shipley; Dr. Mason, Sheffield; Mr. Gramshaw, Easingwold; Mr. Good, Northampton; Mr. Tolier, Barnstaple; Lady Addington, London; Mr. Oldham, Liverpool; Messrs. Christopher Hill and Co., London; Miss Dill, London; Messrs. Maclachlan and Co., Edinburgh; Mr. Fraser, Dublin; Mr. Blything; Messrs. Steel and Jones, London; Mr. Codd, Dublin; Mr. Darby, Belfast; Dr. Waller, Peterboro'; Mr. Robertson, Hastings; Mr. Heywood, Manchester; Mr. Allen, Grimsby; Mr. Parkinson, Bradford; Dr. Warburton, Sheffield; Mrs. Flower, Yeovil; Mr. Wilkins, Newport; Mr. Horsfall, Yorks; Dr. Freer, Rugeley; Sulfonal, London; Granta, London; Index, London; London, Strand; Secretary, Victoria Hospital for Sick Children, Chelsea; A. N., London; Secretary, Coventry and Warwickshire Hospital; Cantab., London; Principal, London; The Hermitage, Yorks; Medicus, Kent; Manager, Hackney Furnishing Co.; Massage, London; Matron, Nottingham; Secretary, Gateshead Dispensary; Assistant, Cardiff; Clerk, Hartlepool Union; Children's Hospital, Manchester; Beta, Louth; Secretary, Liverpool Northern Hospital; Invicta, London; Medicus, York; The Clerk, Stokesley Union, Yorks; Secretary, General Infirmary, Derby; Vicar, Upper Tooting; Medicus, Durham; Saladin, London; Secretary, Bedford General Infirmary; Sanitas, Borough; Secretary, Weston-super-Mare Hospital; M. S., Birkenhead; A. B. C., London; Secretary, Clayton Hospital, Wakefield; M.D., Hackney; A., Devonport; Dean, Throat Hospital, Golden-square; Apollo, London; Secretary, University College, Liverpool; S., London; Bimbi, London; Secretary, Union Association, London; H. W., London; Secretary, Royal Portsmouth Hospital; M.R.C.S.E., London; Suburbs, London; Secretary, London Temperance Hospital; J. H., St. John's-wood; Secretary, Burnley Victoria Hospital; Eustachian, London; Medicus, Manchester; Nil Desperandum, London; L. M., London; M. C., London; E., Sheffield.

NEWSPAPERS.—*New York Press, Scottish Pleader, Sheffield Daily Telegraph, North British Agriculturist, Builder, Kilkenny Journal, New York Herald (London), Sunday Times, Broad Arrow, Liverpool Daily Post, Metropolitan, Chemist and Druggist, City Press, Hertfordshire Mercury, Philanthropist, Mining Journal, West Middlesex Standard, Reading Mercury, Weekly Free Press and Aberdeen Herald, Insurance Gazette, Surrey Advertiser, Bristol Mercury, China Mail, Windsor and Eton Express, Christian Globe, Leeds Mercury, Cheshire Observer, Times of India, Glasgow Herald, Lincoln Gazette, Methodist Times, Alliance News, Hobart Mercury, Manchester Courier, Public Opinion, Primitive Methodist, St. James's Gazette, Englishman, Lincoln, Rutland, and Stamford Mercury, Tamworth Mercury, Brisbane Courier, Altrincham and Bowdon Guardian, Scottish Border Record, British and Colonial Druggist, Frank Leslie's Illustrated Newspaper, Bournemouth Visitors' Directory, Nottingham Evening Post, Newcastle Leader, West Herts Post, Preston Herald, Lincolnshire Chronicle*, &c., have been received.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.